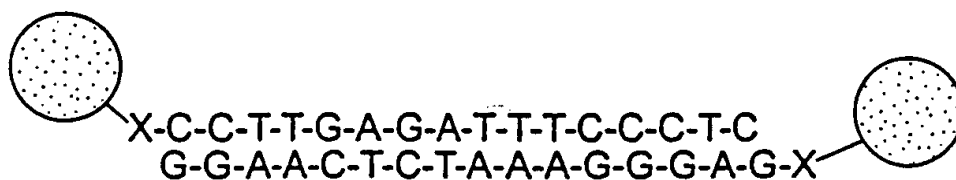
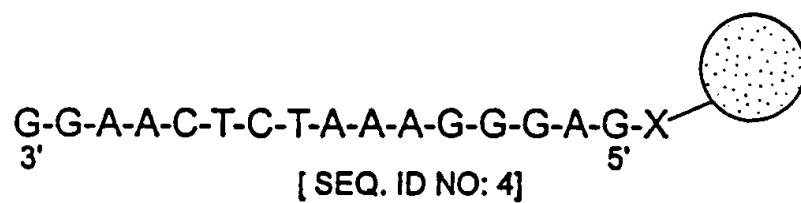
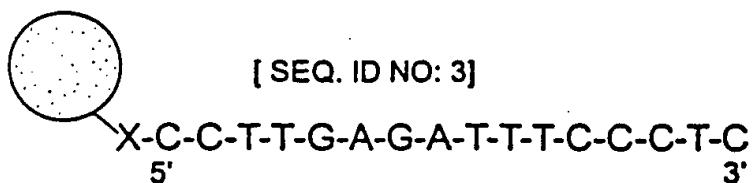


FIG. 1



TOPPOT-92ES2660

FIG.2

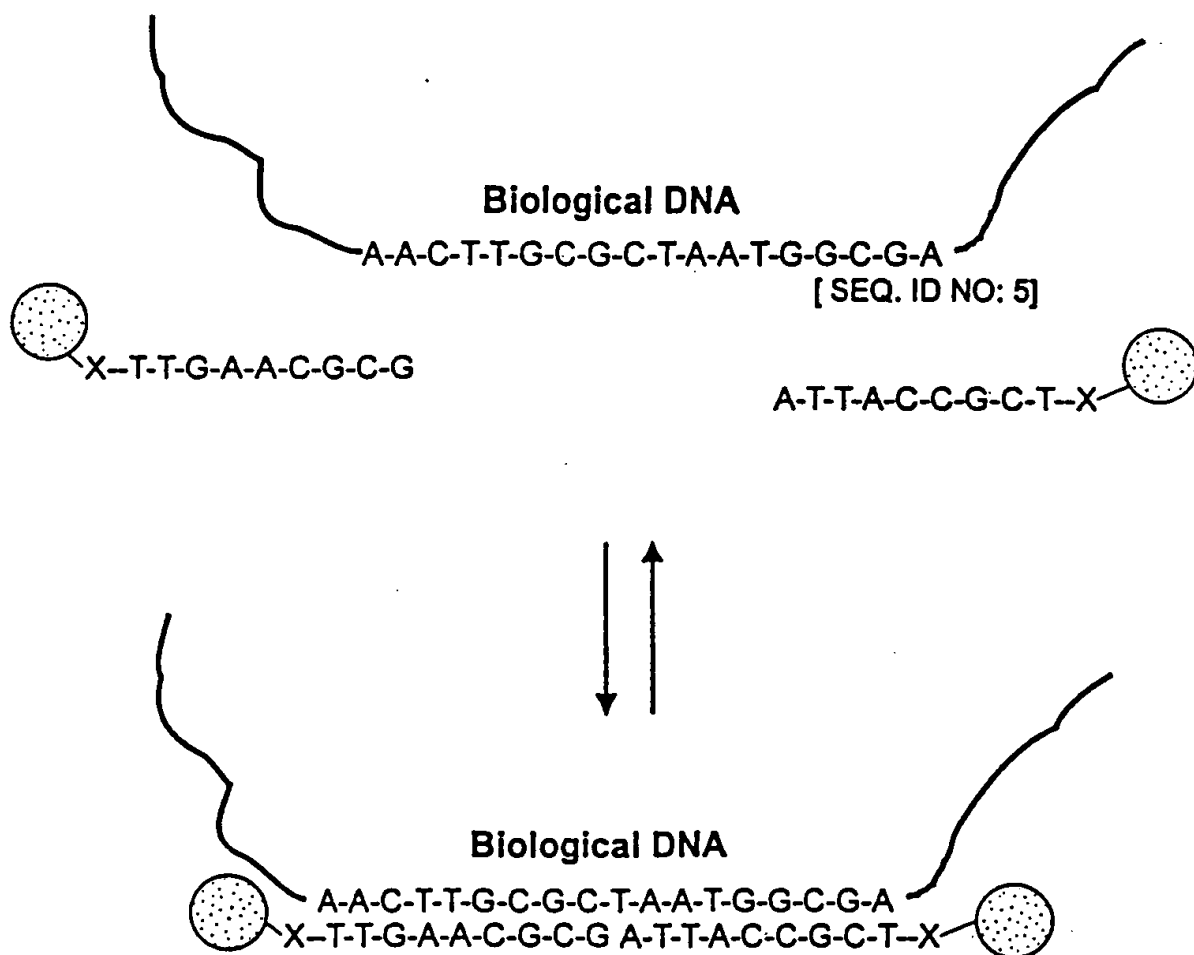
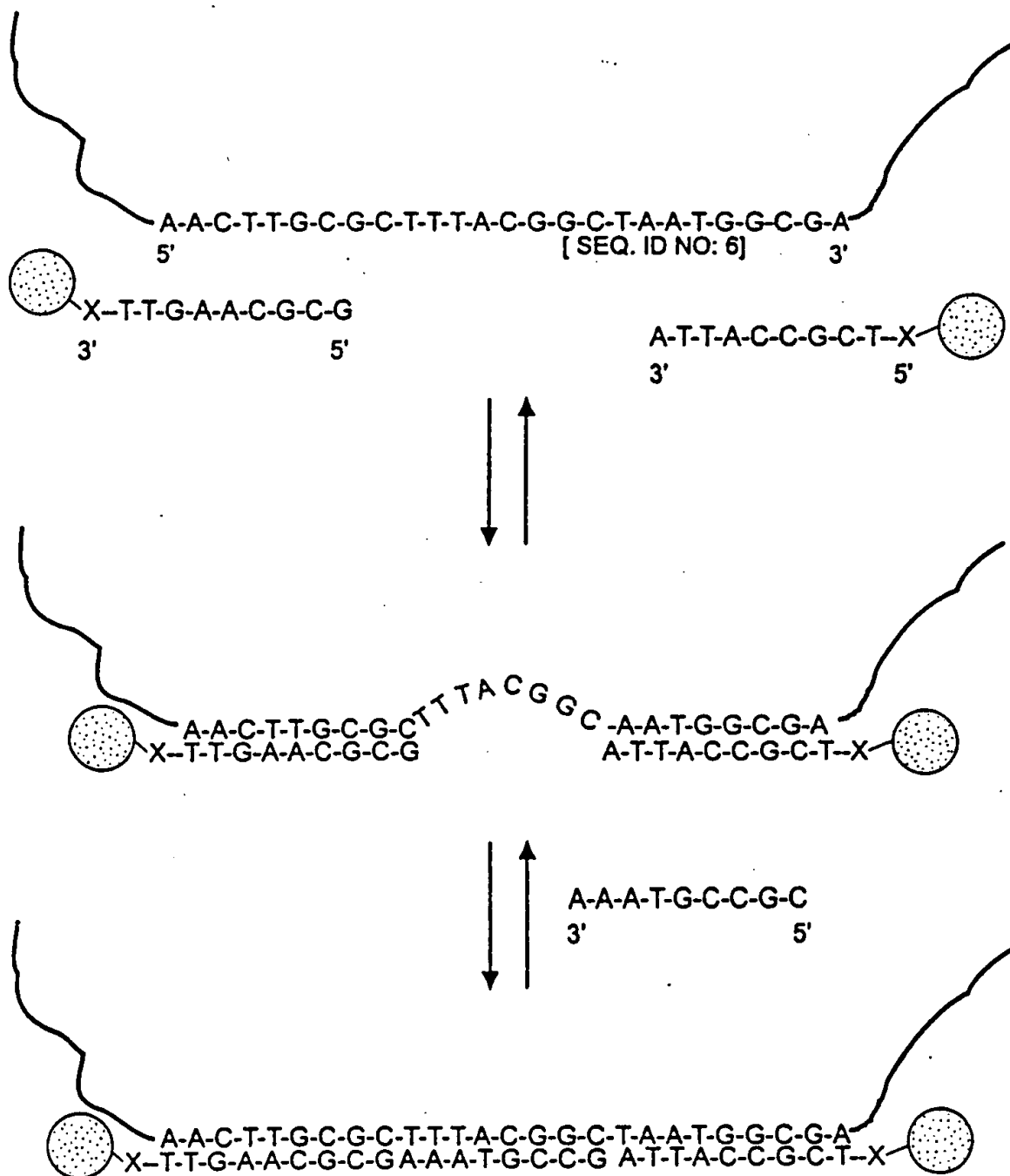


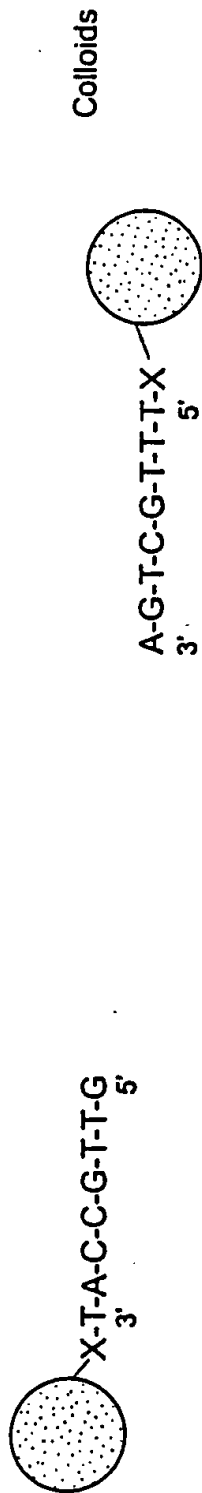
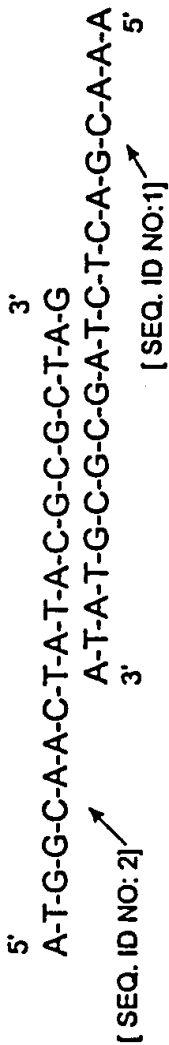
FIG.3



TTTTT"9ZESZ660

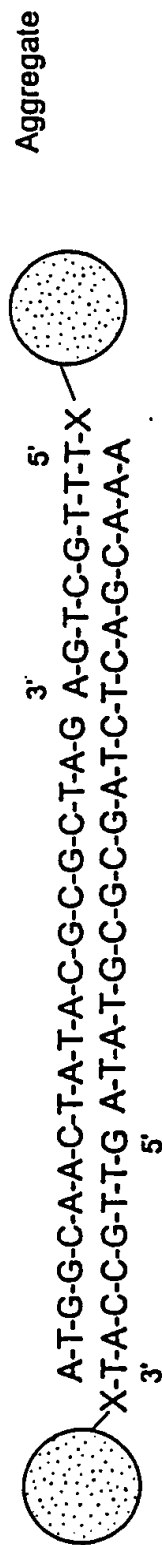
FIG. 4

Linking oligonucleotide



Heat

Mix below T_m

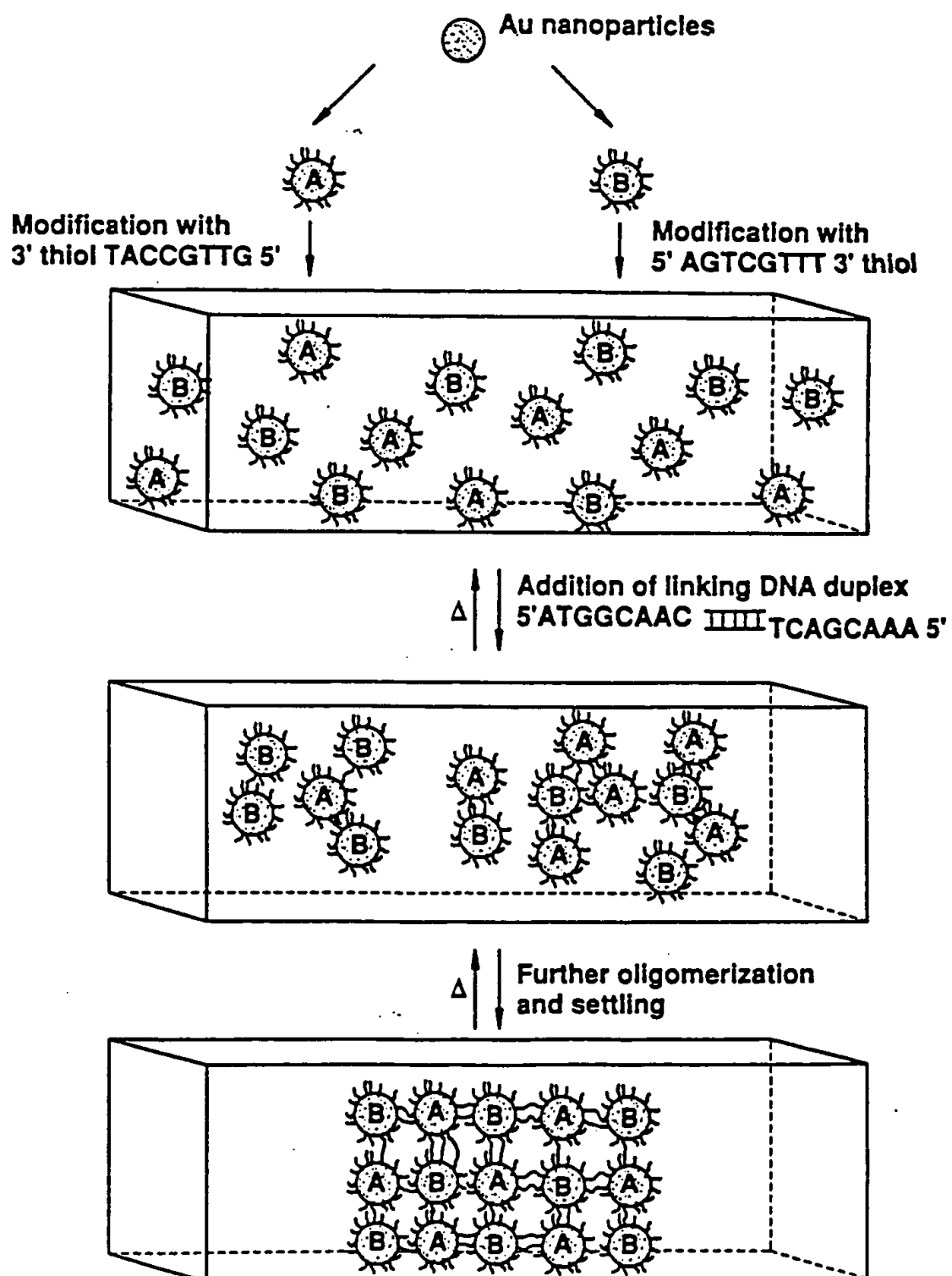


Heat

Stand below T_m

Precipitate (formed by further cross-linking)

FIG.5



TTTT-9252660

TOTOT 9454660



FIG. 6A FIG. 6B FIG. 6C

FIG. 7

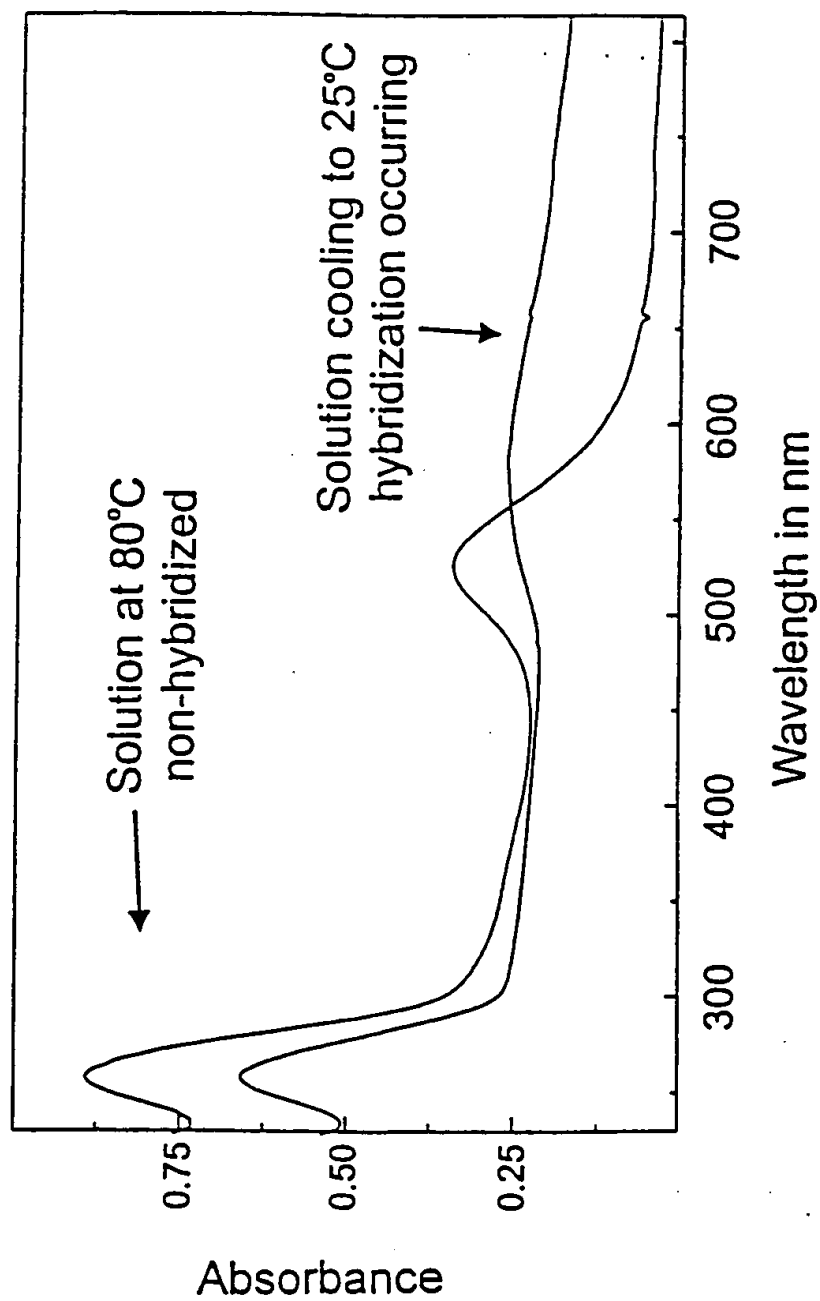


FIG.8A

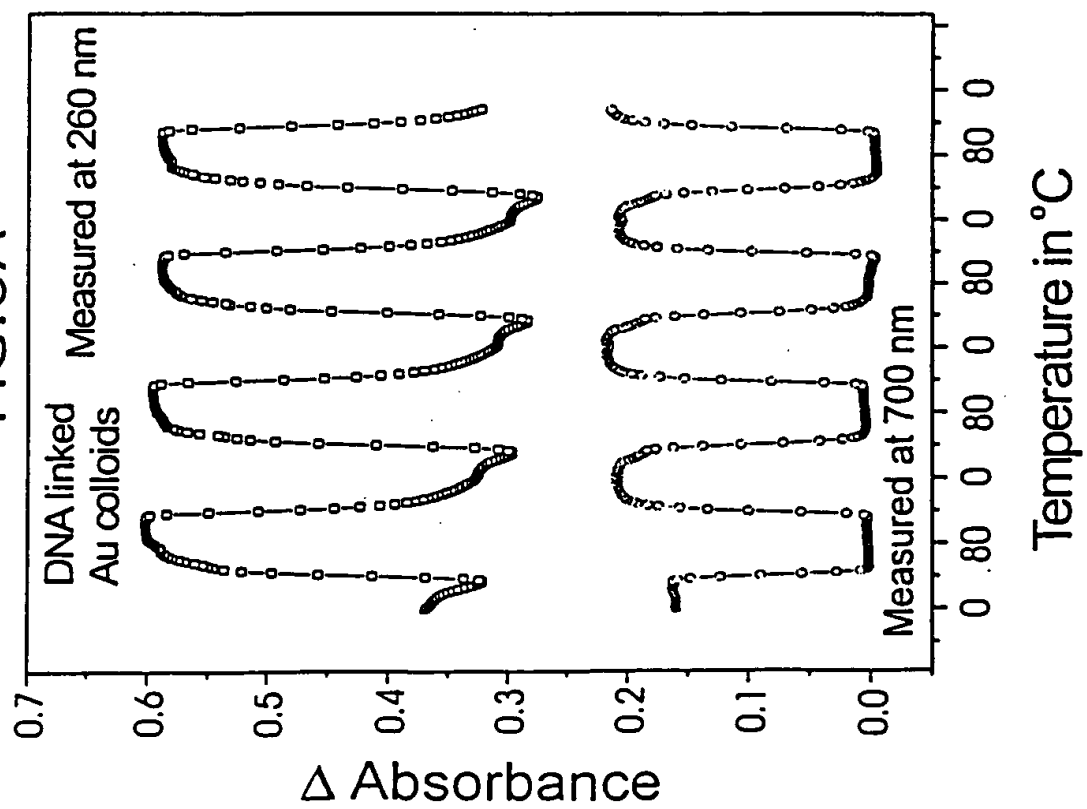
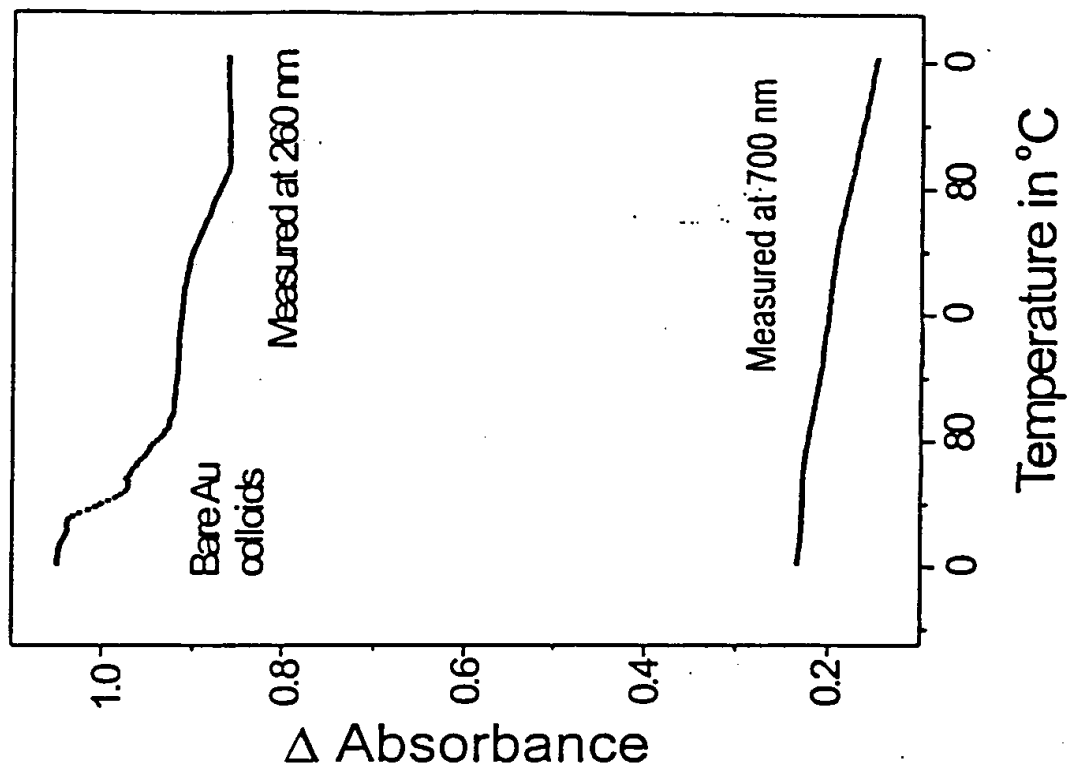


FIG.8B



09975376-101101



FIG.9A

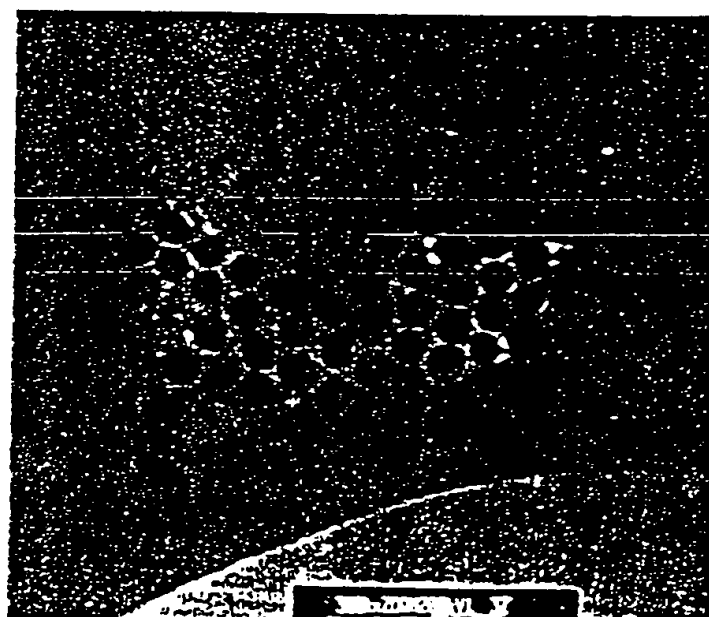


FIG.9B

FIG.10

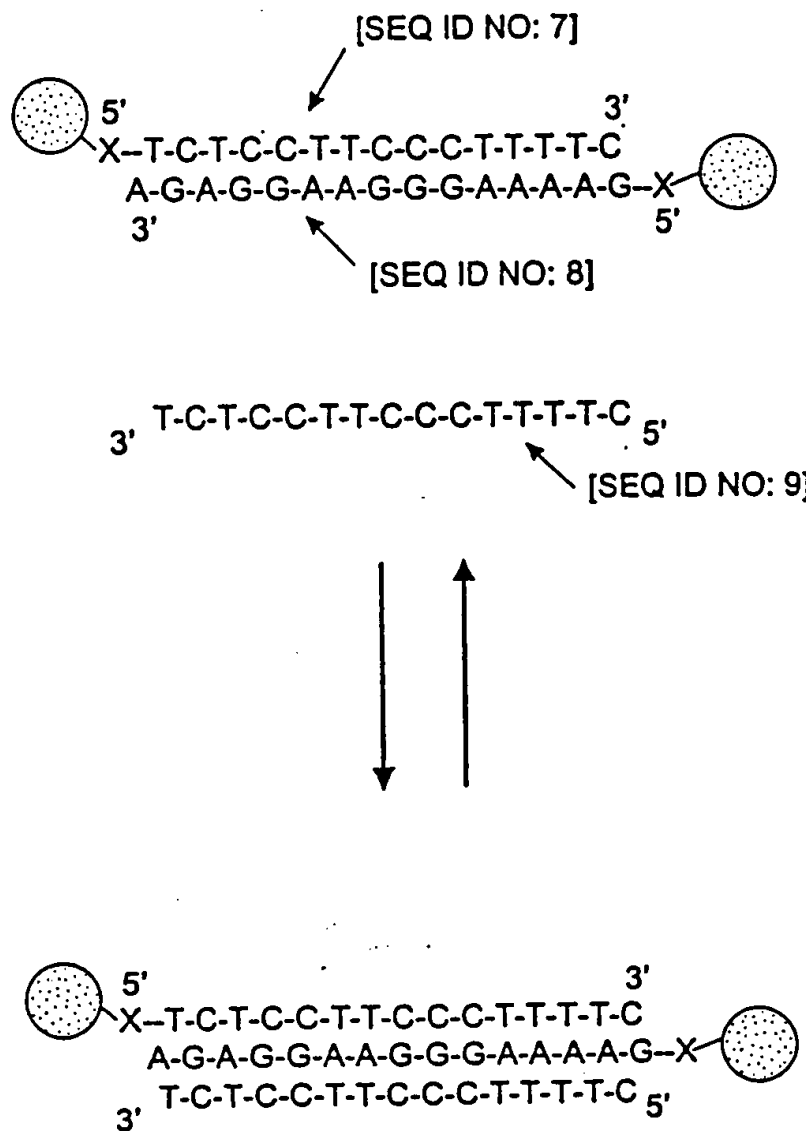


FIG. 10

FIG.11

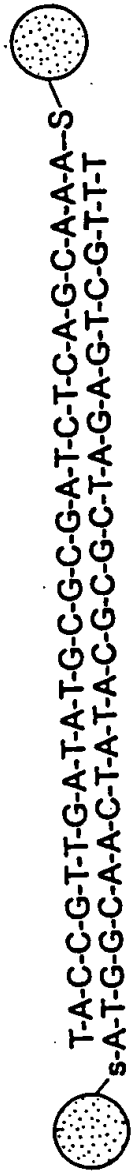
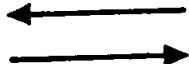
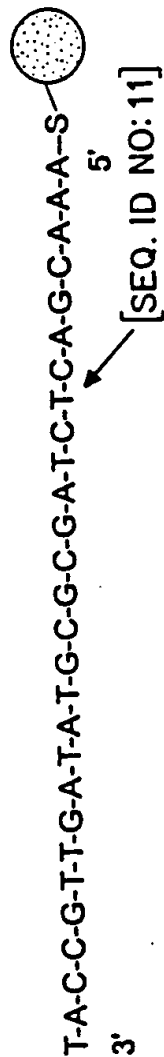
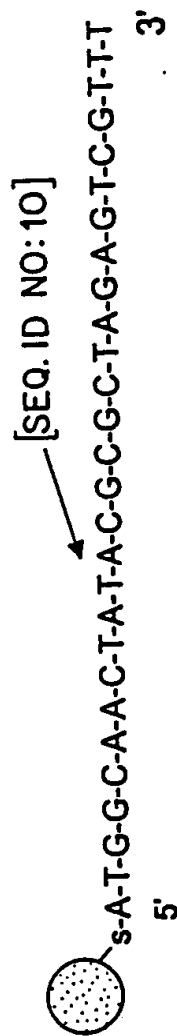


FIG. 12A

Complementary Target

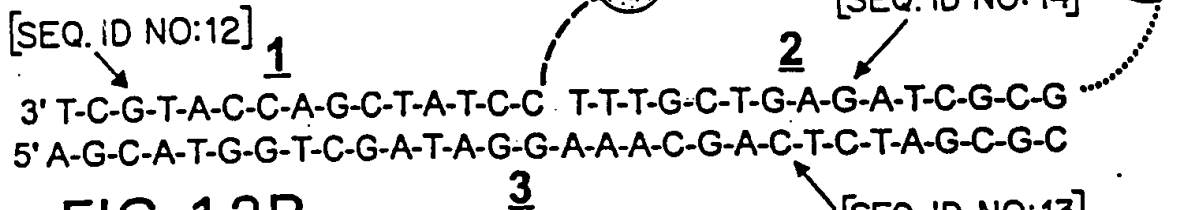


FIG. 12B

Probes without Target

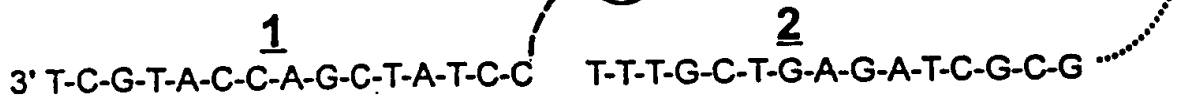


FIG. 12C

Half Complementary Target

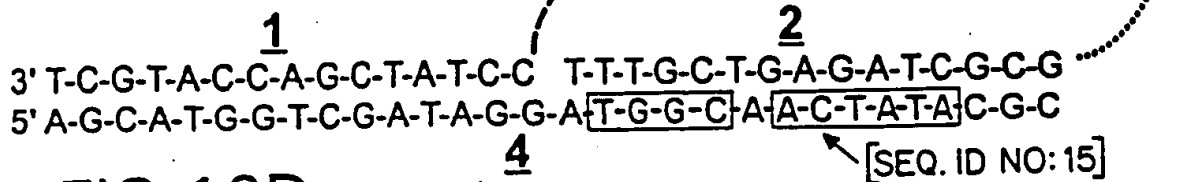


FIG. 12D

Target - 6 bp

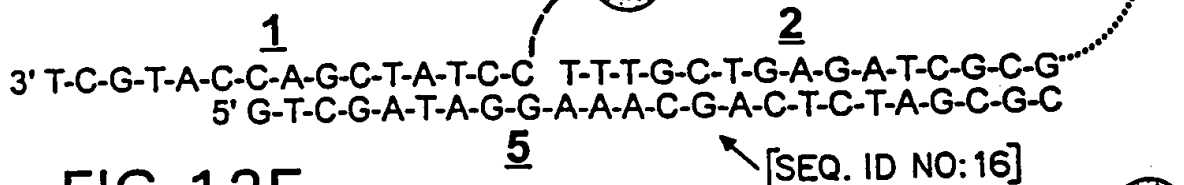


FIG. 12E

One bp Mismatch

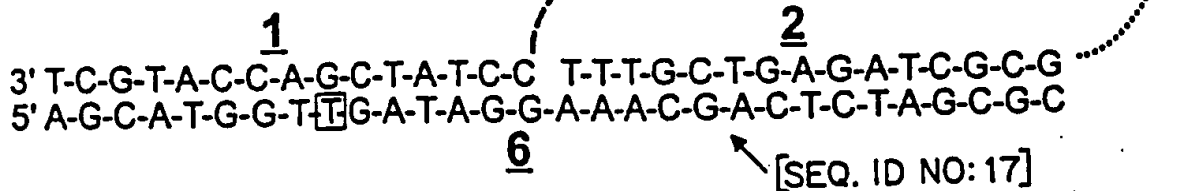


FIG. 12F

Two bp Mismatch

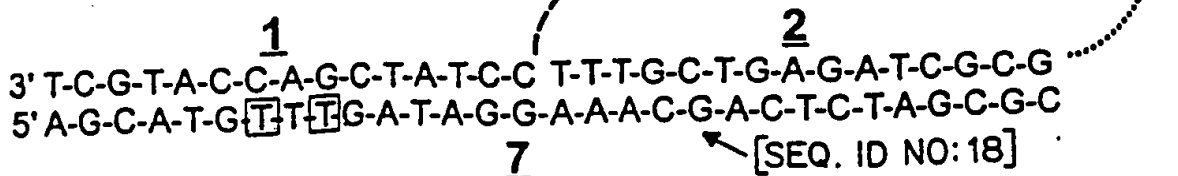


FIG.13A

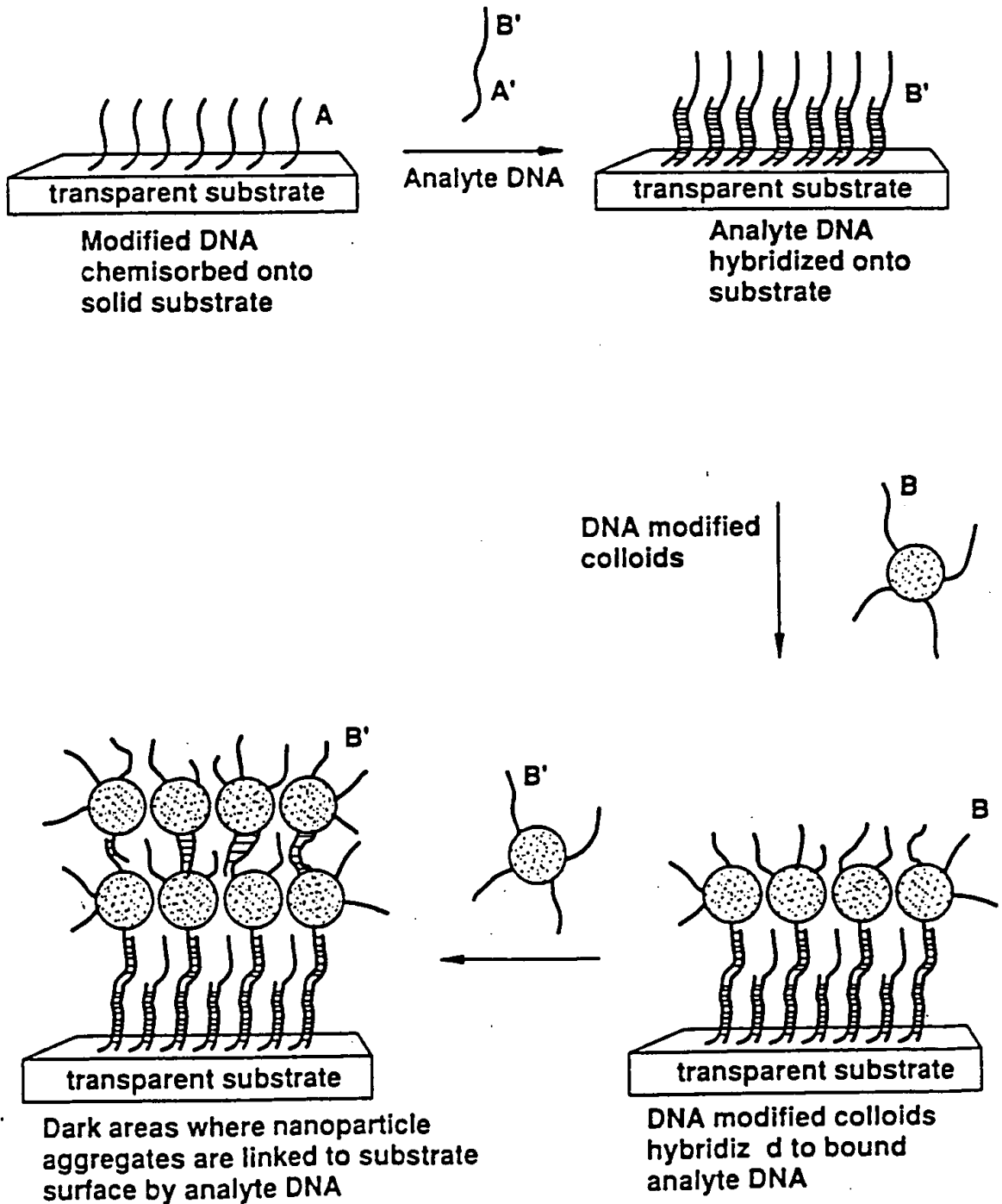


FIG. 13A

FIG.13B

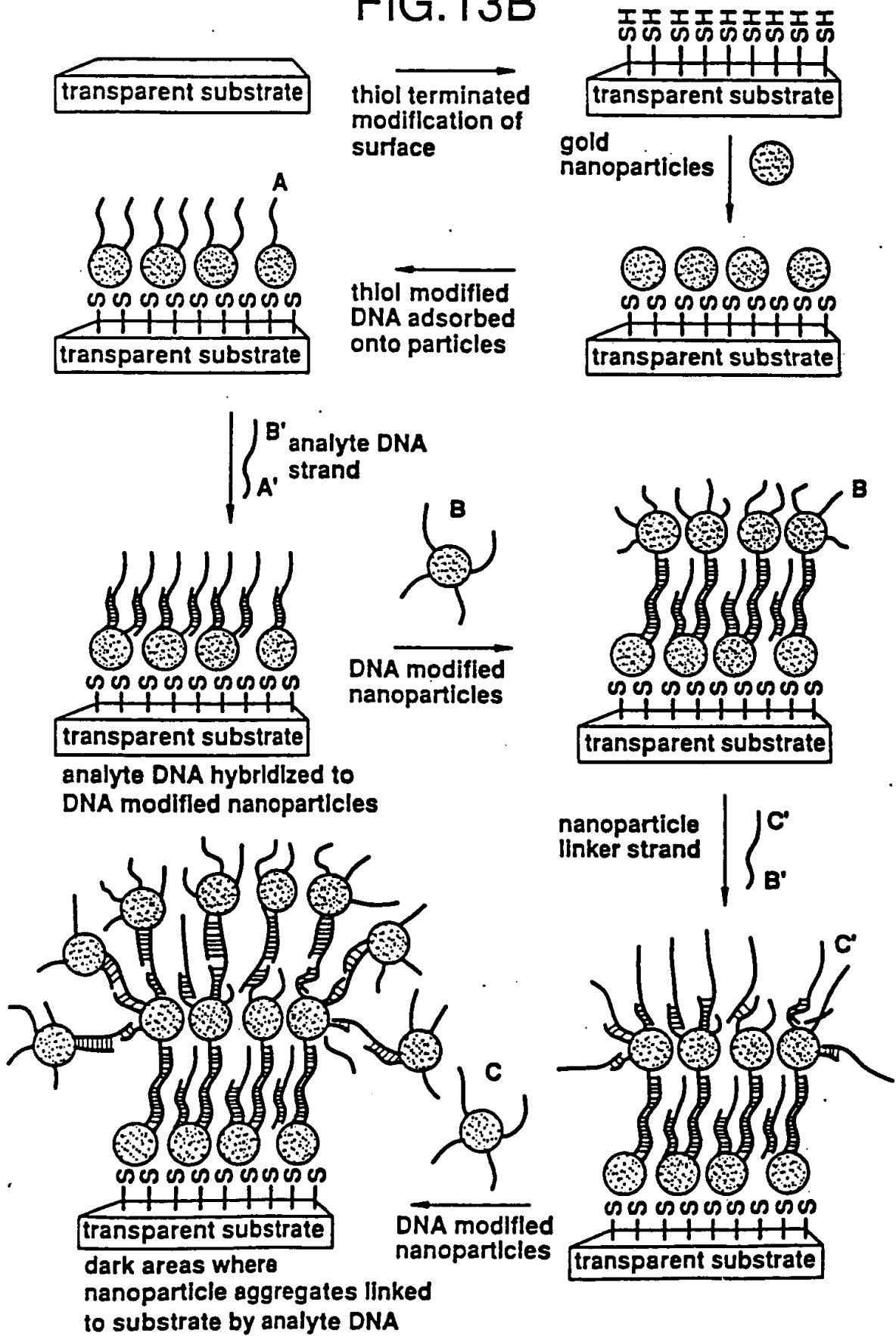


FIG. 13B

FIG.14A

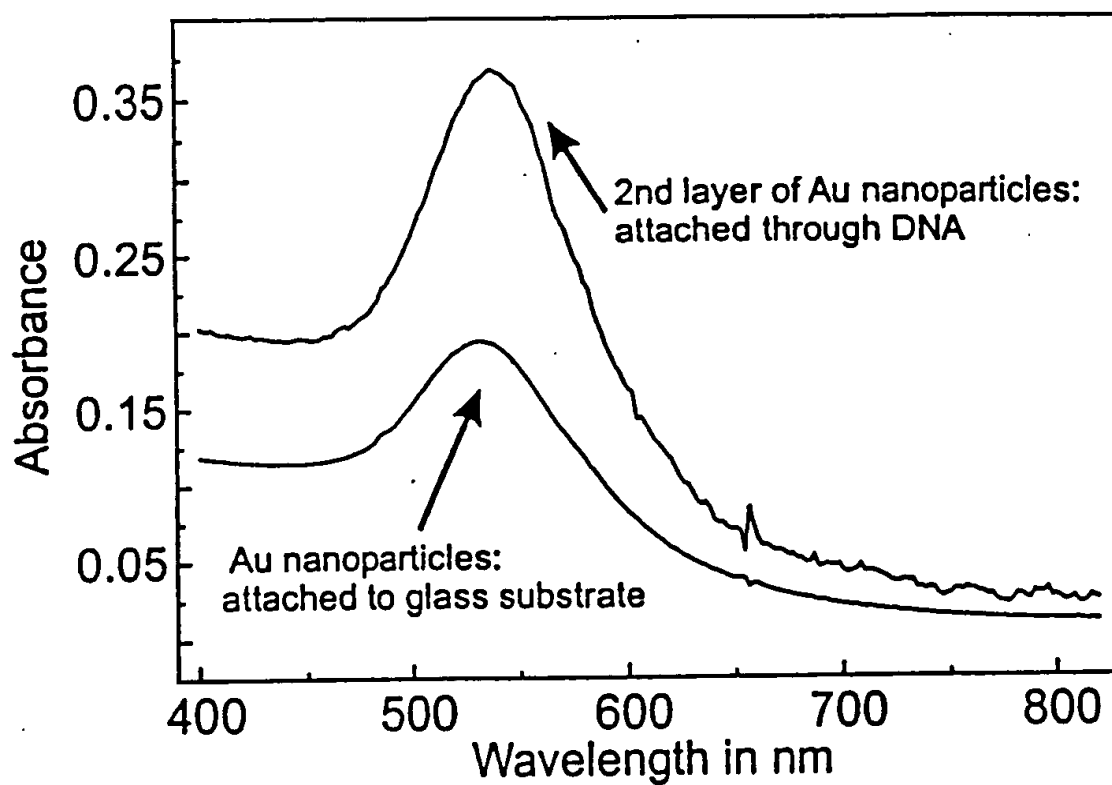


FIG.14B

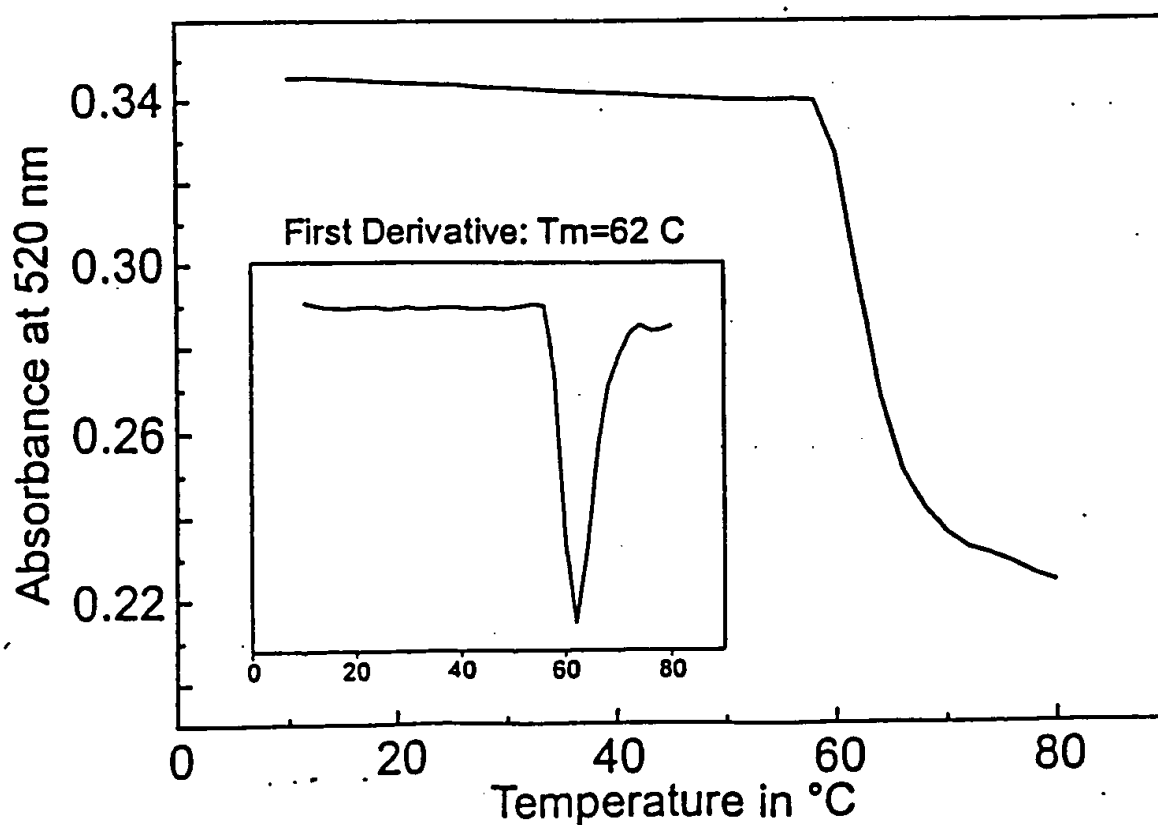


FIG15A

Probes with No Target

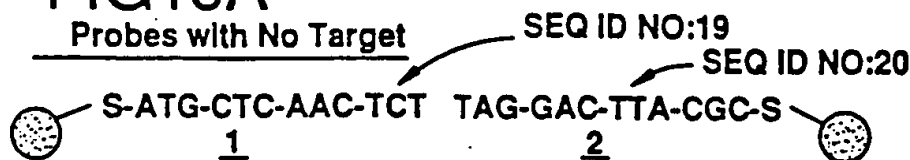


FIG15B

Half-Complementary Target

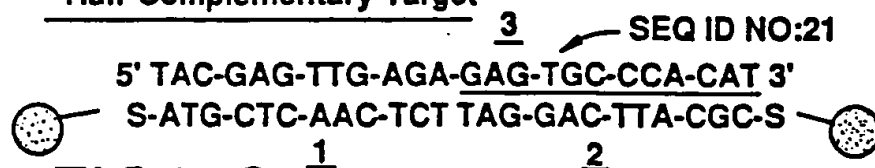


FIG15C

Complementary Target

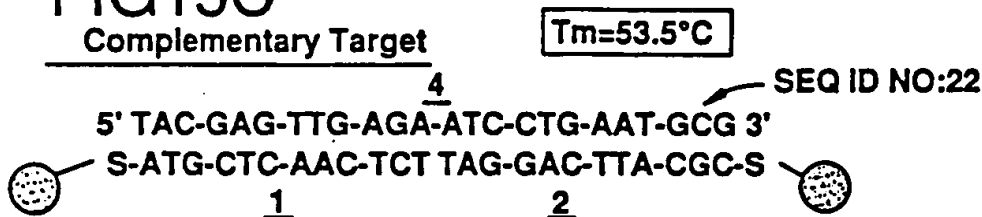


FIG15D

ONE Base-Pair Mismatch at Probe Head

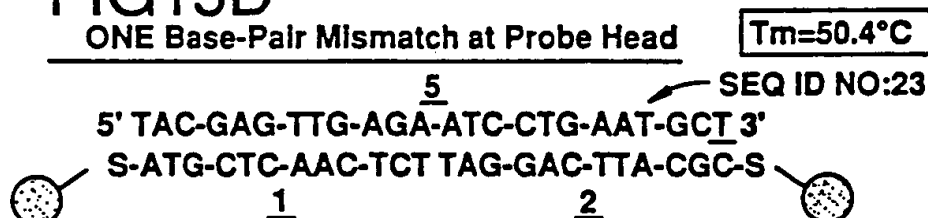


FIG15E

ONE Base-Pair Mismatch at Probe Tail

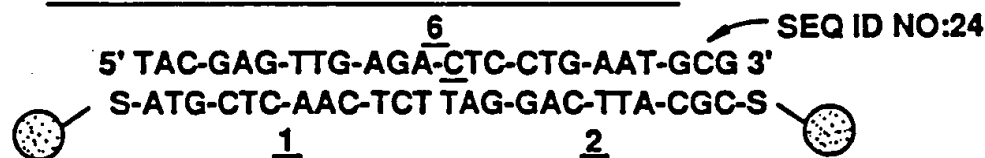


FIG15F

ONE Base Deletion

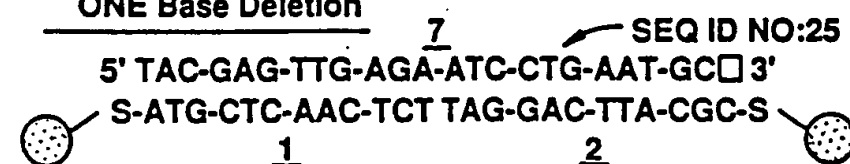


FIG15G

ONE Base-Pair Insertion

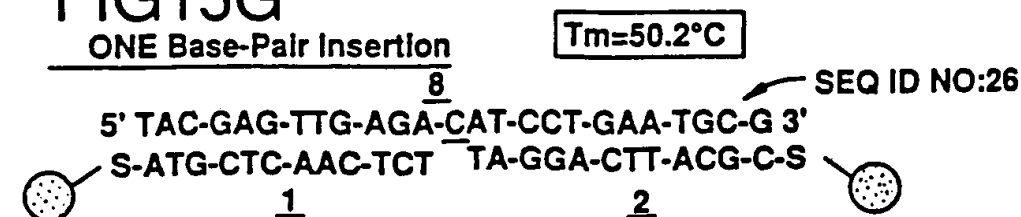


FIG. 16A

24 Base Template

5' TAC-GAG-TTG-AGA-ATC-CTG-AAT-GCG 3'

—S-ATG-CTC-AAC-TCT TAG-GAC-TTA-CGC-S —

१॥

2

FIG. 16B

48 Base Template with Complementary 24 Base Filler

5'TAC-GAG-TTG-AGA-CCG-TTA-AGA-CGA-GGC-AAT-CAT-GCA-ATC-CTG-AAT-GCG 3'

—S-ATG-CTC-AAC-TCT GGC-AAT-TCT-GCT-CCG-TTA-GTA-CGT TAG-GAC-TTA-CGC-S—

१।

21

FIG. 16C

72 Base Template with Complementary 48 Base Filler

5' TAC-GAG-TTG-AGA-CCG-TTA-AGA-CGA-GGC-AAT-CAT-GCA-TAT-ATT-GGA-CGC-TTT-ACG-GAC-AAC-ATC-CTG-AAT-GCG 3'

—S-ATG-CTC-AAC-TCT GGC-AAT-TCT-GCT-CCG-TTA-GTA-CGT-ATA-TAA-CCT-GCG-AAA-TGC-CTG-TTG TAG-GAC-TTA-CGC-S—

५।

21

FIG. 17A

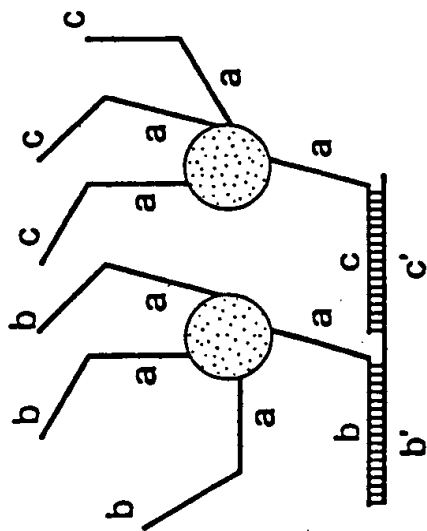


FIG. 17B

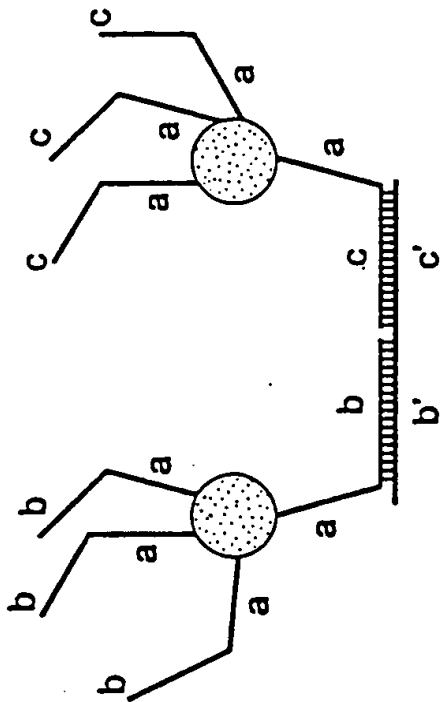


FIG. 17C

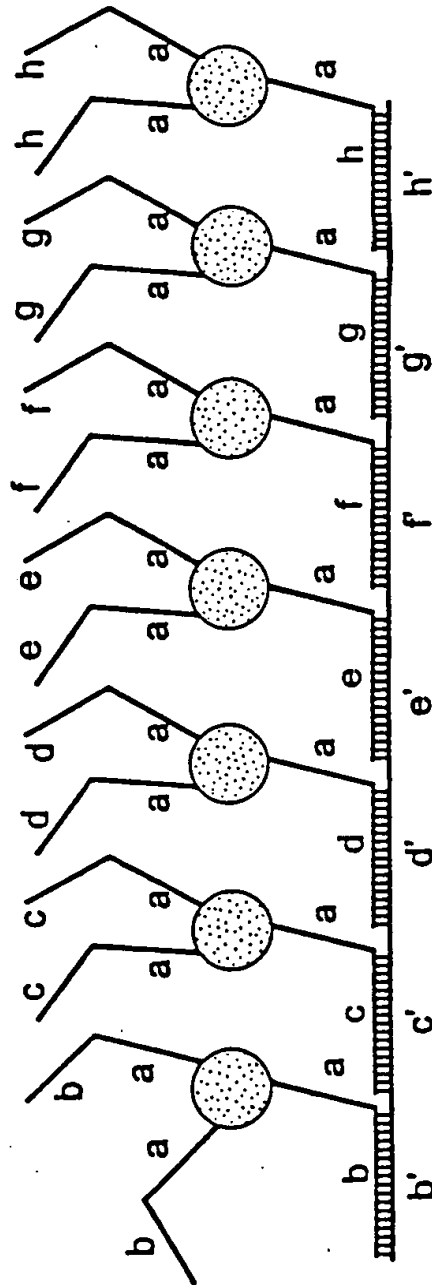


FIG.17D

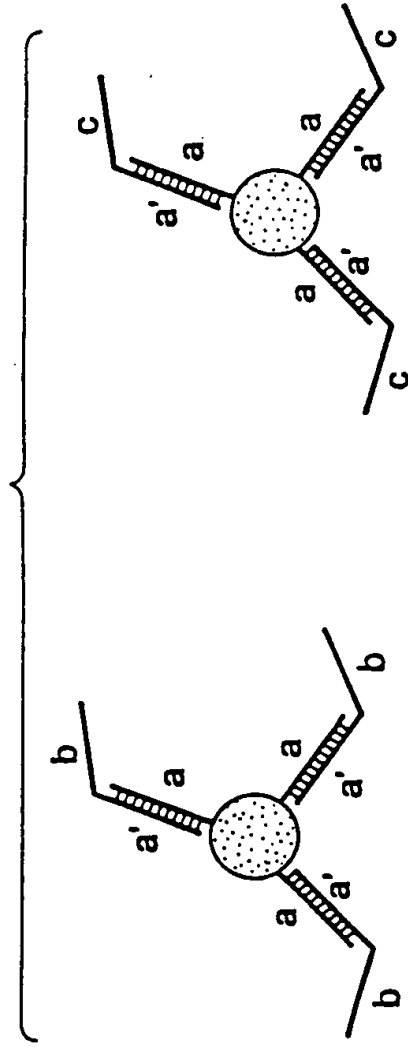


FIG.17E

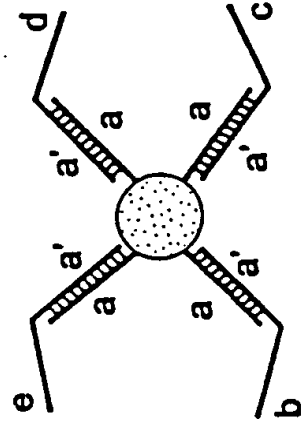


FIG.18

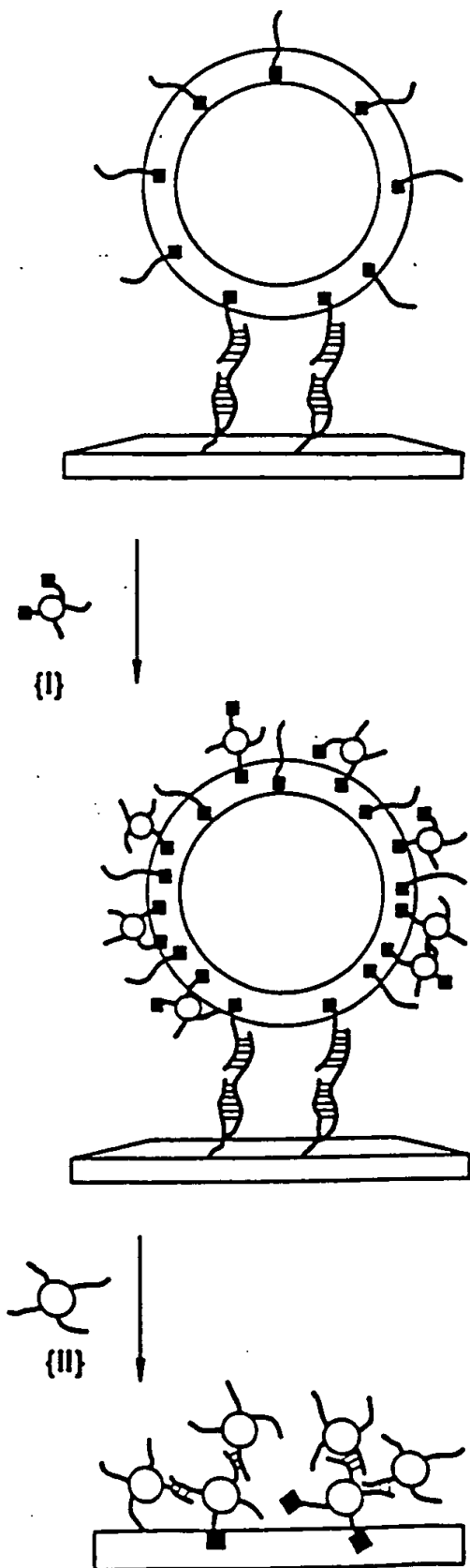


FIG.19A

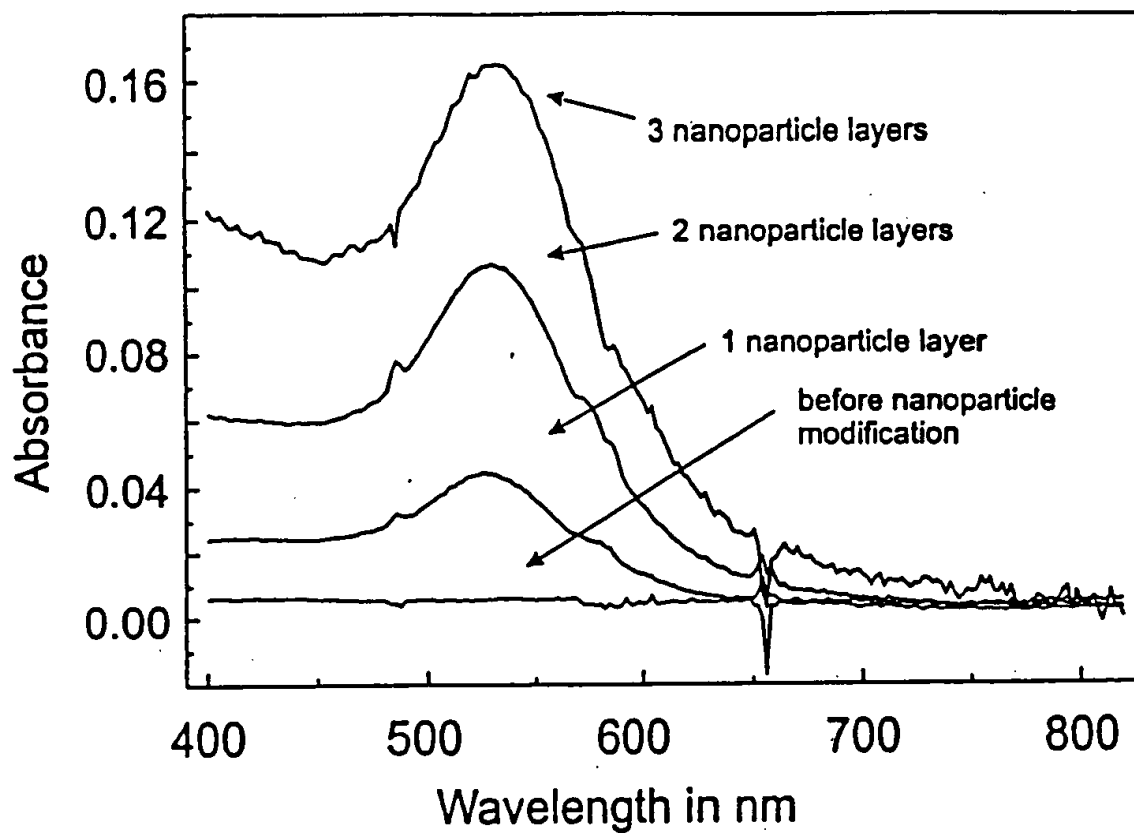
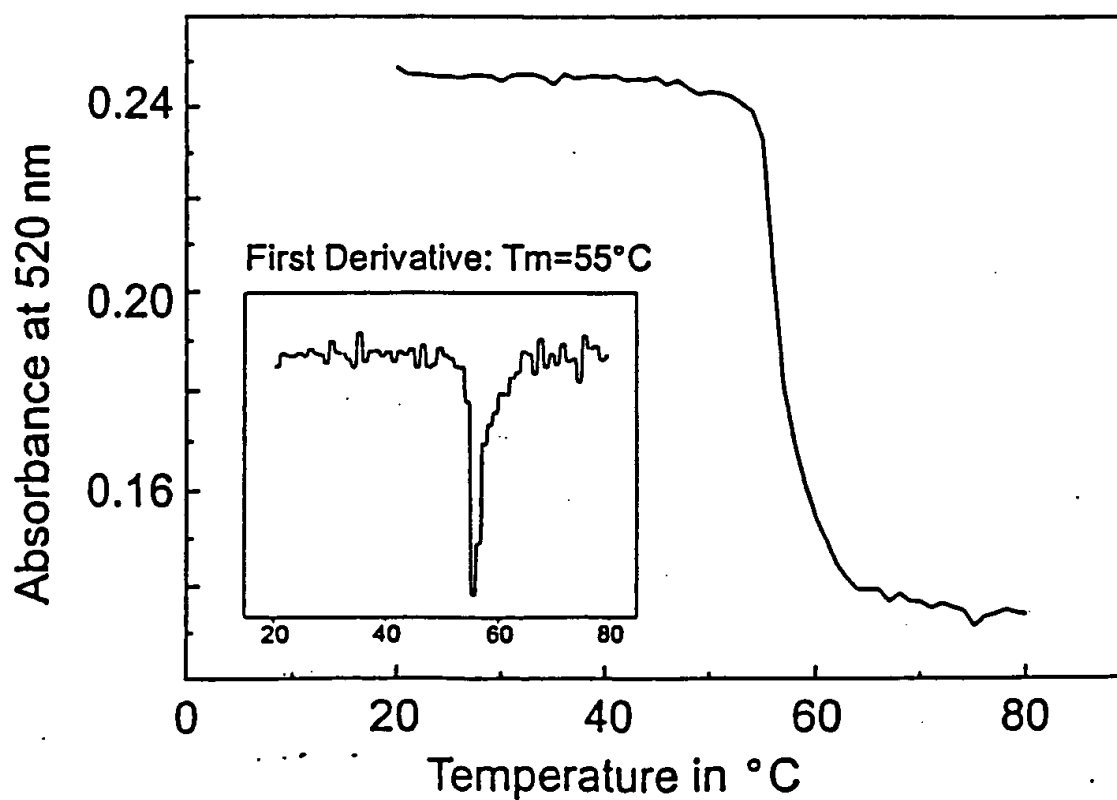


FIG.19B



099525/660

FIG.20A

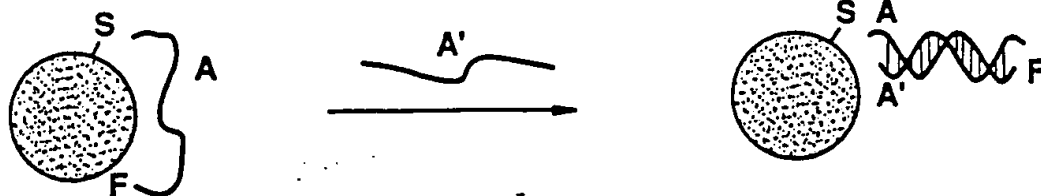
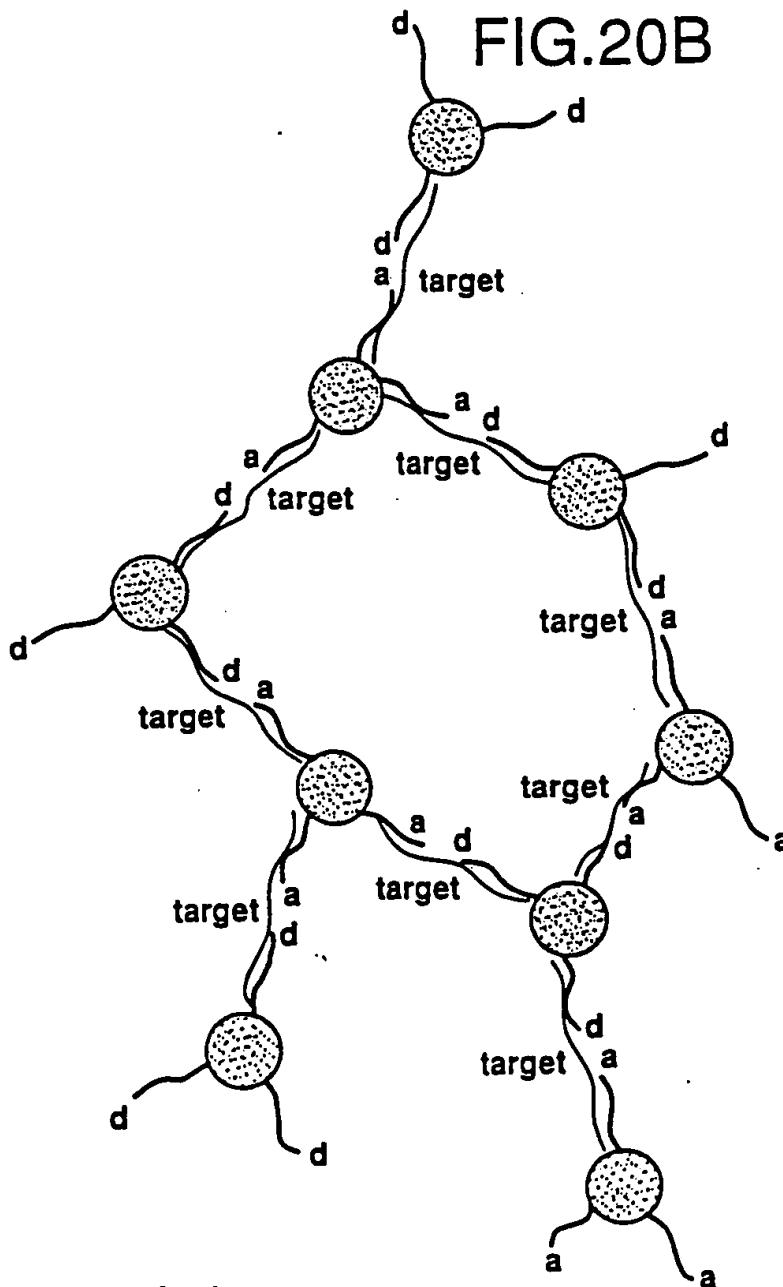
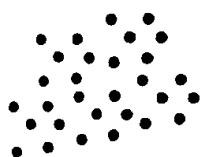


FIG.20B

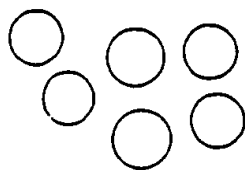


Oligonucleotide
modified Au
nanoparticle probes



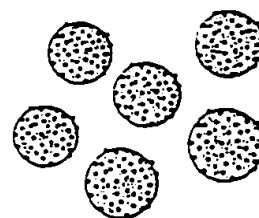
Red

Fluorophore labeled
oligonucleotide modified
latex probes



White/Fluorescent

Au/Latex hybrid

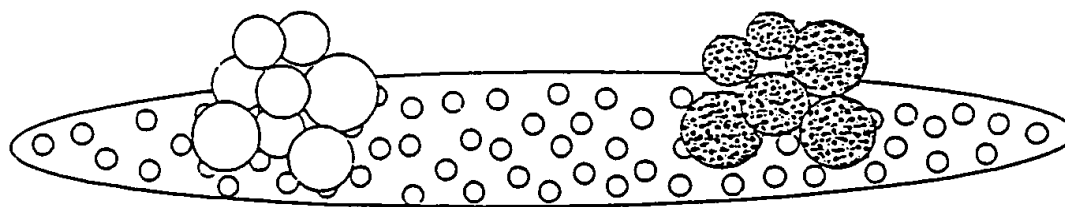


Pink/Non-fluorescent

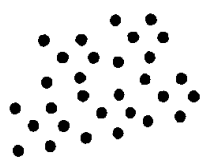
Target
Oligonucleotide

No Target
Oligonucleotide

Target
Oligonucleotide



All Au probes pass
through membrane

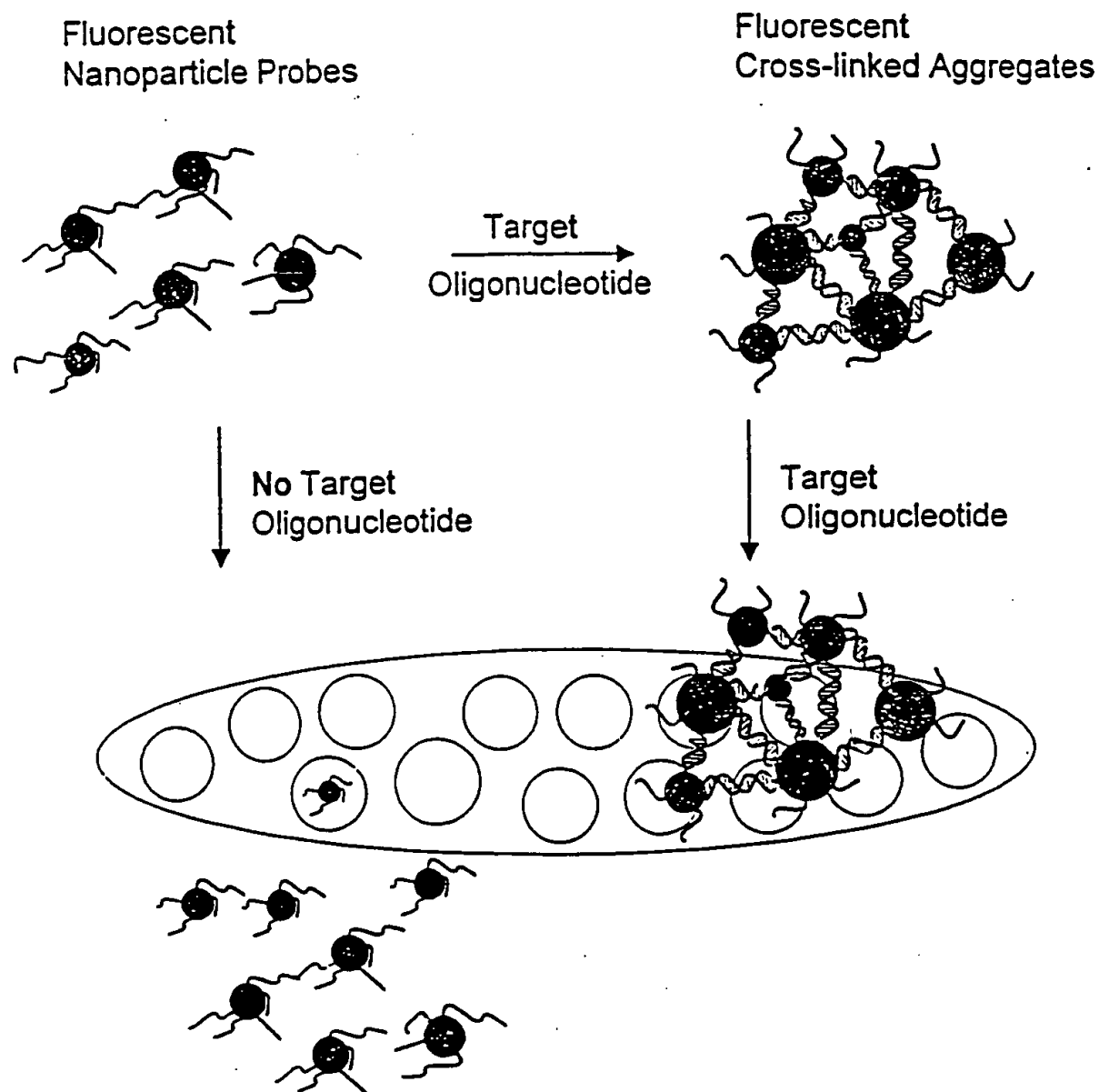


Excess Au probes
pass through
membrane



FIGURE 21

FIGURE 22



The fluorescent nanoparticle probes pass through the membrane

The fluorescent cross-linked aggregates are retained by the membrane

[illegible]

ATA TTA TCC AGG GTT ATA TTG TAG AAA TTG AAG ATA CTG AAG GGC TT 3'
TAT AAT AGG TCC CAA TAT AAC ATC TTT AAC TTC TAT GAC TTC CCG AA 5'

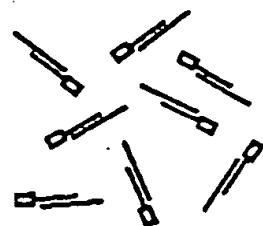
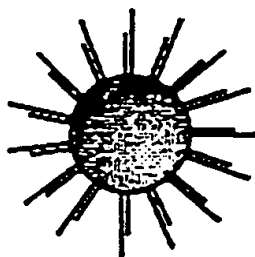
Oligonucleotide-Nanoparticle Probes

3' C CGC CTA CTC AGT CAT CAA TTC CTC CGA GT	[SEQ	ID	NO: 39]
3' A TCT CTT CAT TAA TTA AGC AGT TGT	[SEQ	ID	NO: 40]
3' TAT TCT TTT TAT AAT AGG TCC CAA TAT	[SEQ	ID	NO: 41]
3' AAC ATC TTT AAC TTC TAT GAC TTC CCG AA	[SEQ	ID	NO: 42]

FIGURE 23

A stylized sun with a circular face and rays. The sun's face is a circle with a textured, stippled pattern. It has several rays extending outwards, each ending in a small, rectangular box. The rays are arranged in a circular pattern around the sun's face.

Target



Detection Signal

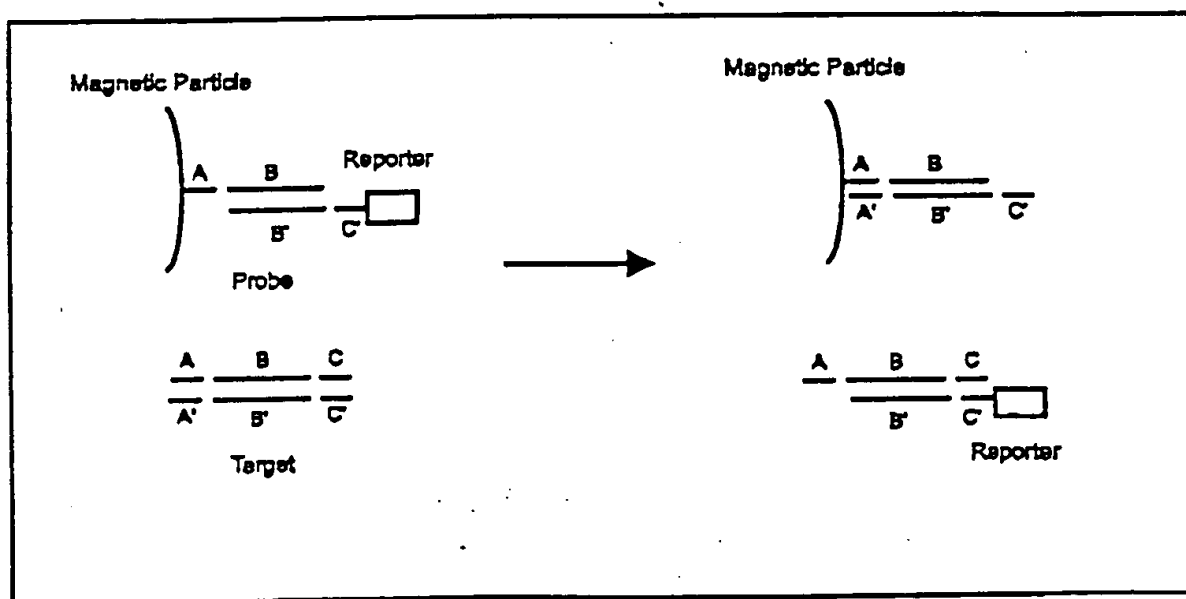


FIGURE 24

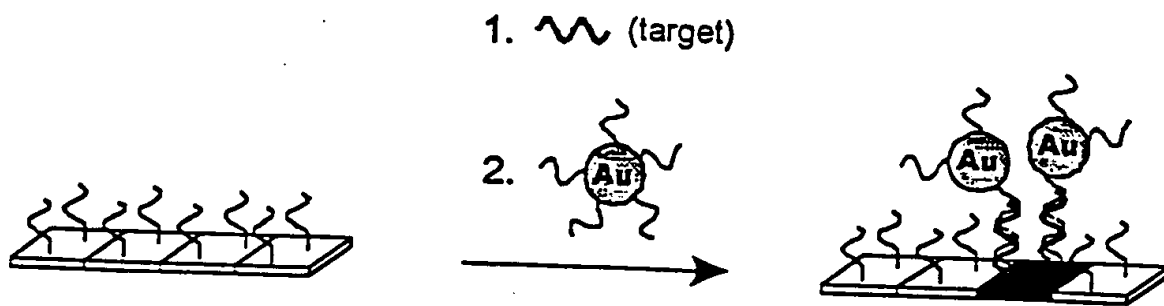


FIGURE 25A

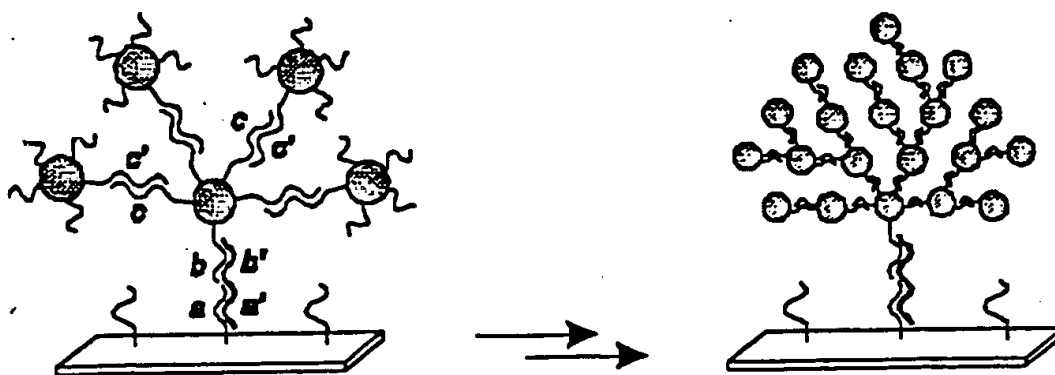
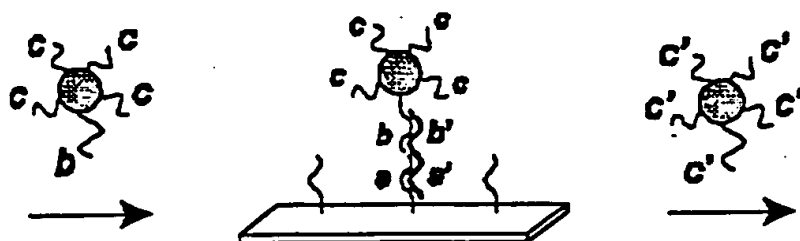
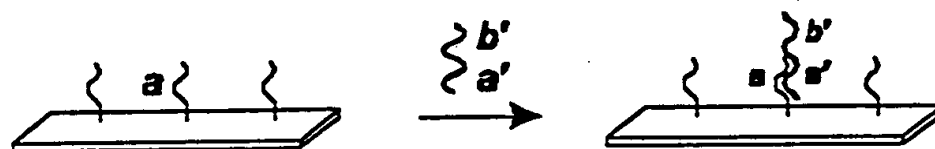


FIGURE 25B

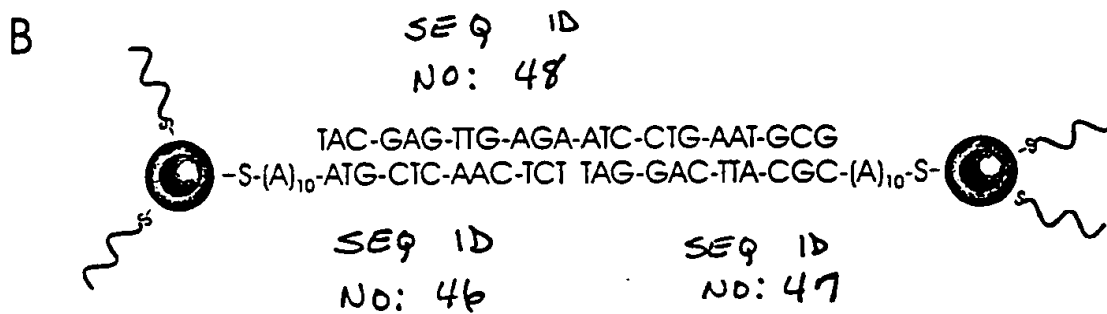
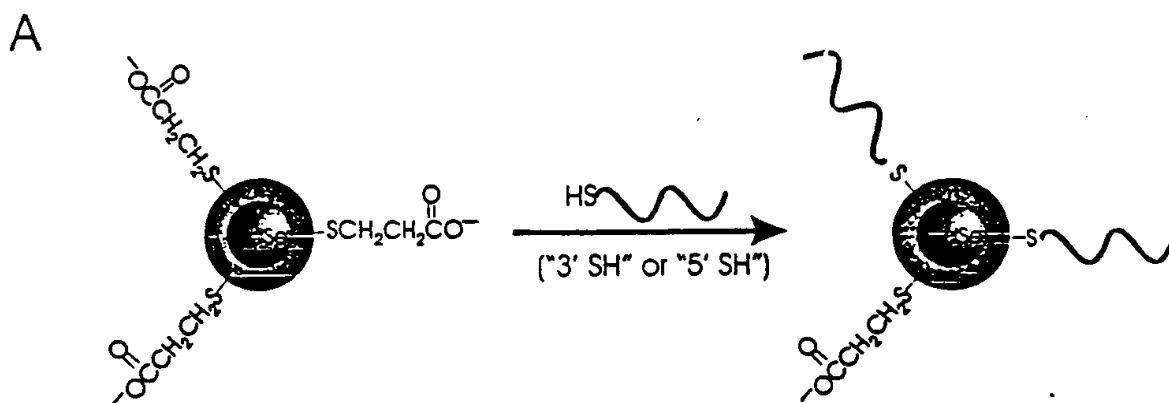


FIGURE 26

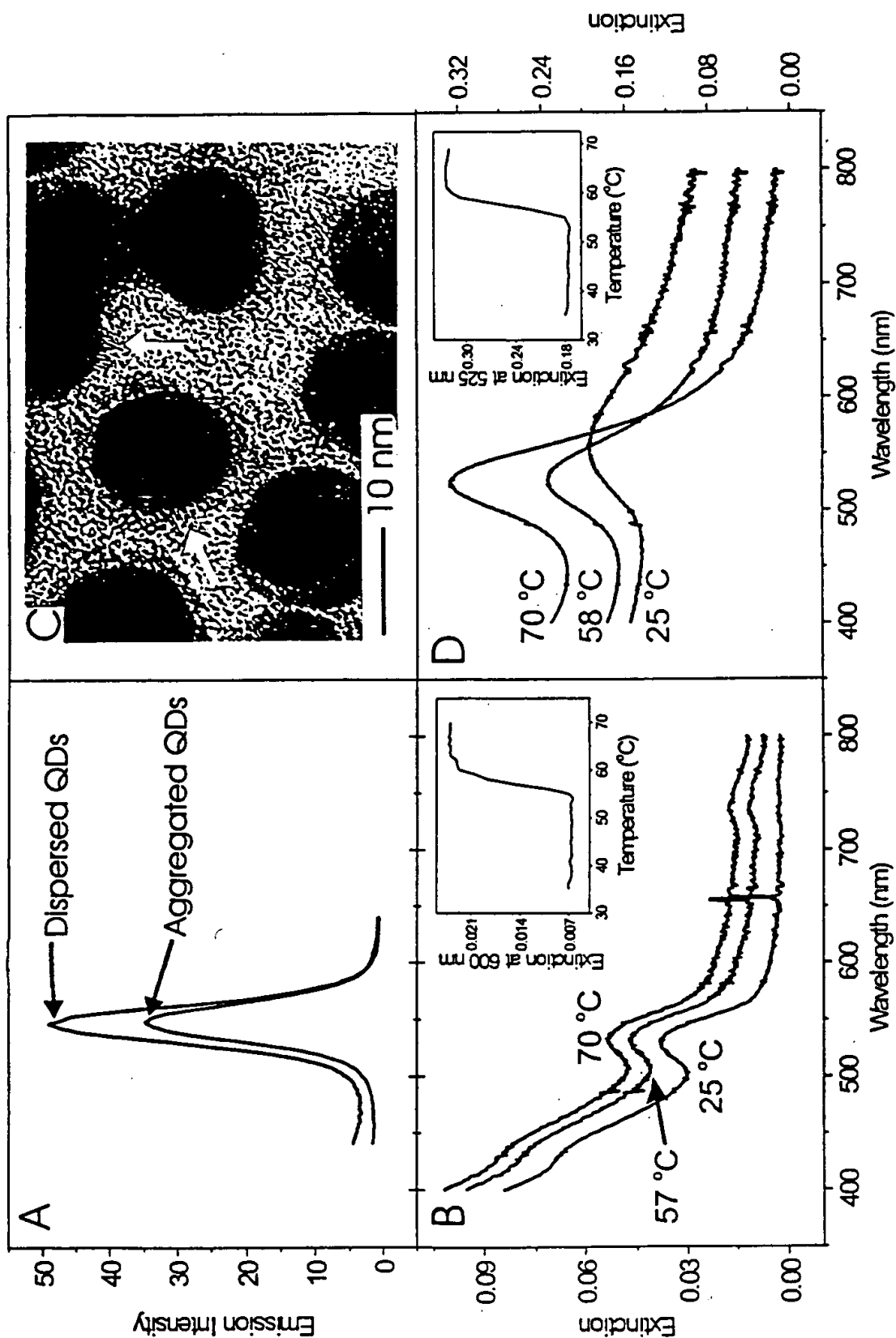


FIGURE 27

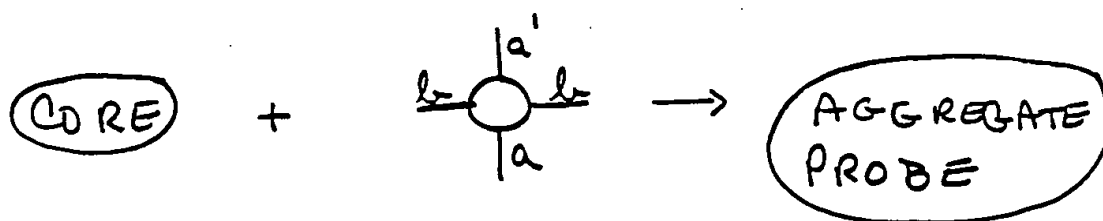
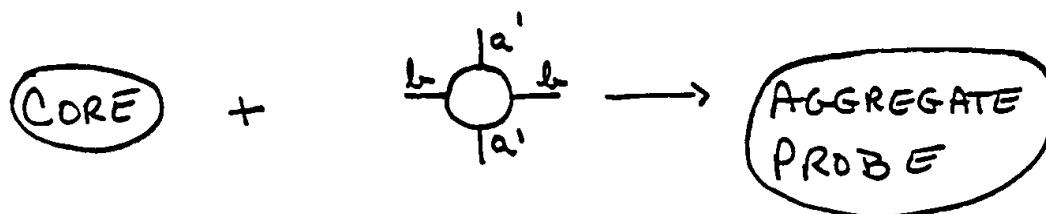
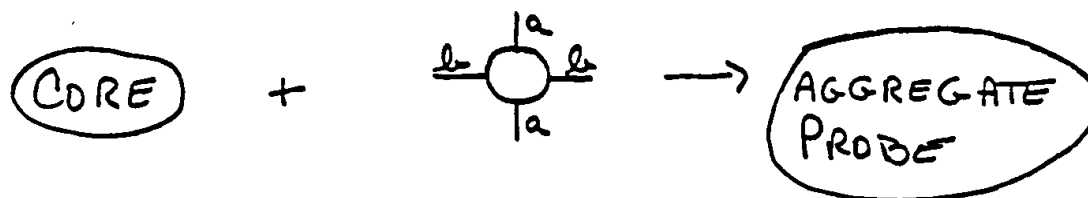
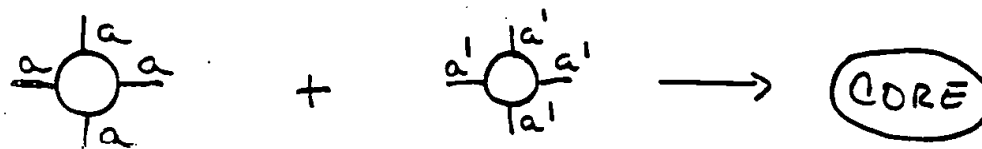


FIGURE 28A

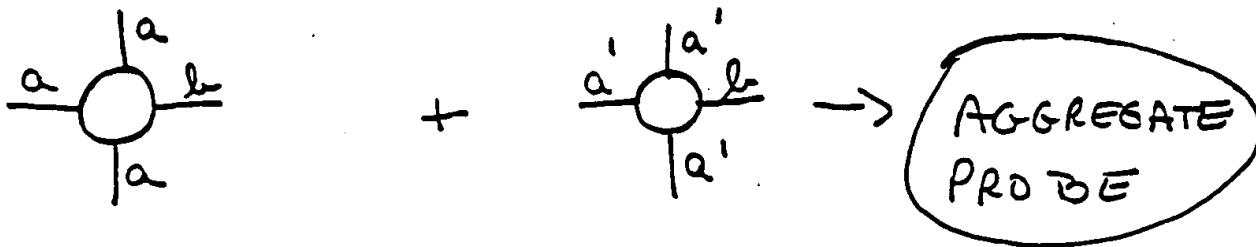


FIGURE 28B

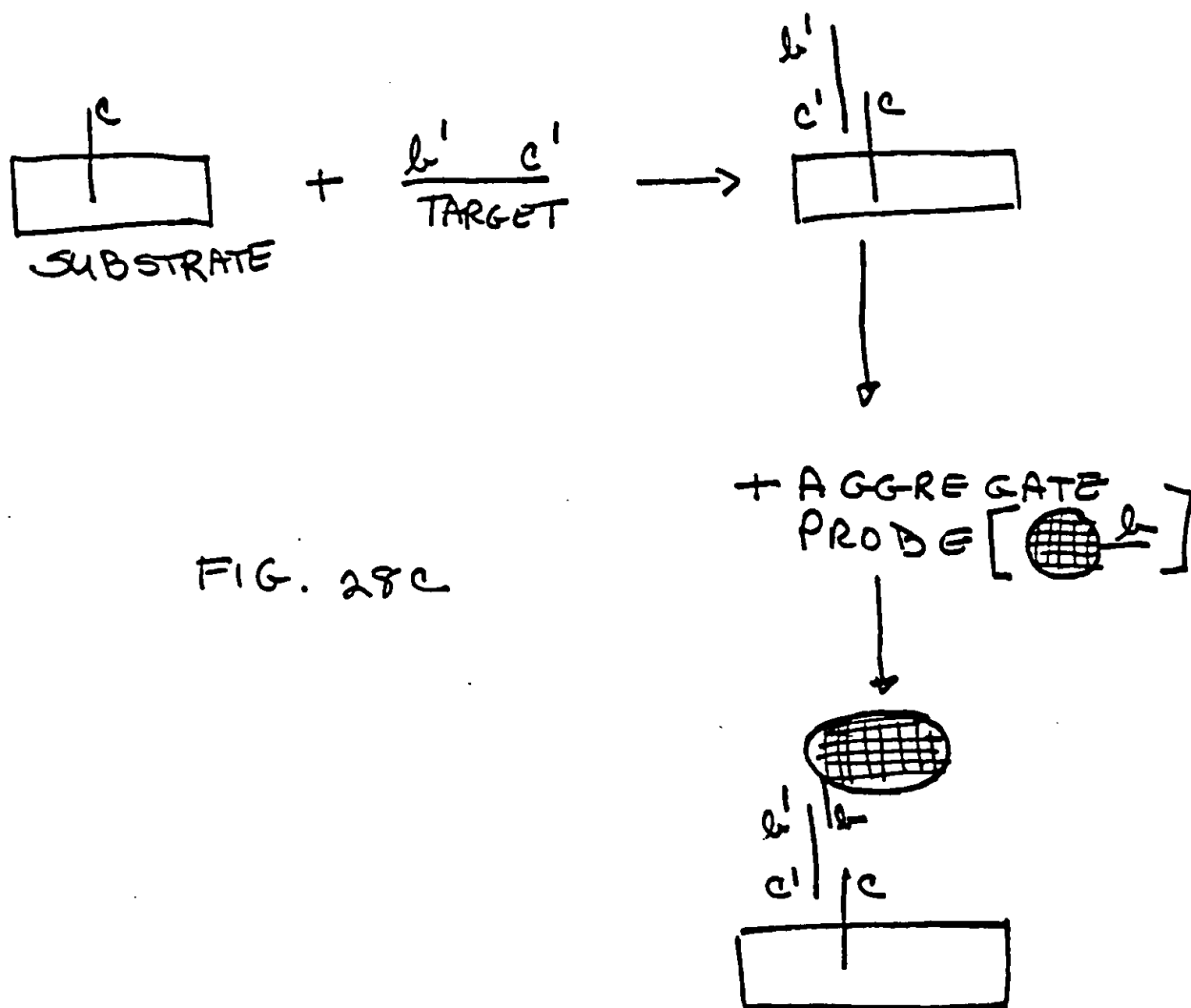
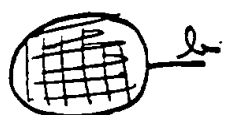


FIG. 28C

TOP SECRET


 AGGREGATE
 PROBE

+ $\frac{b' \quad c'}{\text{TARGET}}$ + $\begin{array}{c} e \\ \circ - d \end{array}$

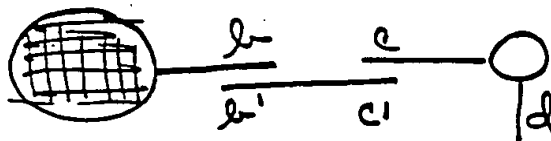
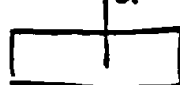
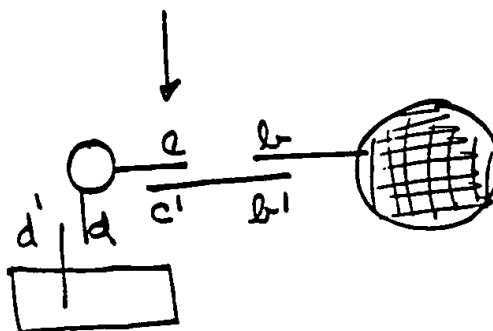


FIG. 28D

REMOVE EXCESS
 BY CENTRIFUGATION



+  SUBSTRATE



09552660
 92552660
 92552660

09975376-101101
TOTTOT 92E52660

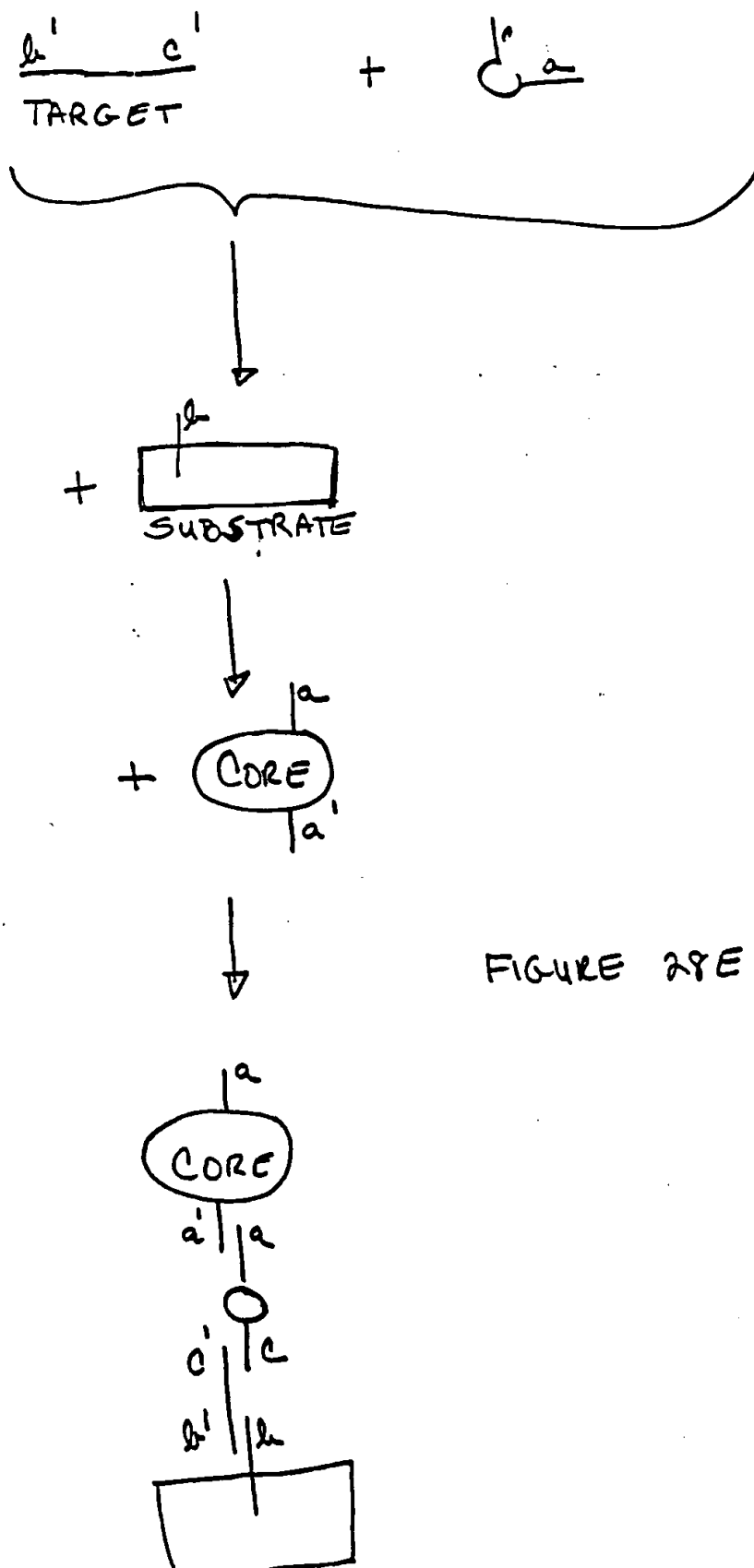


FIGURE 29E

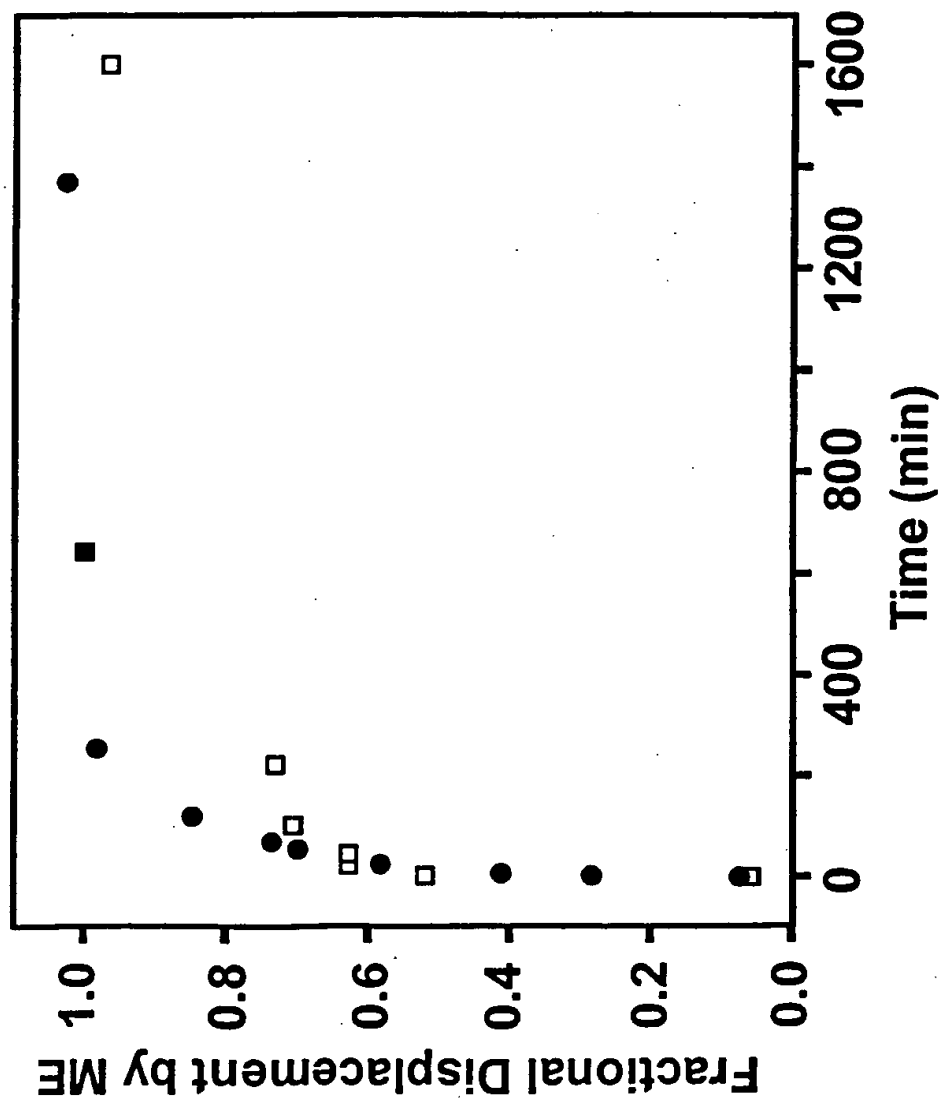


Figure 29

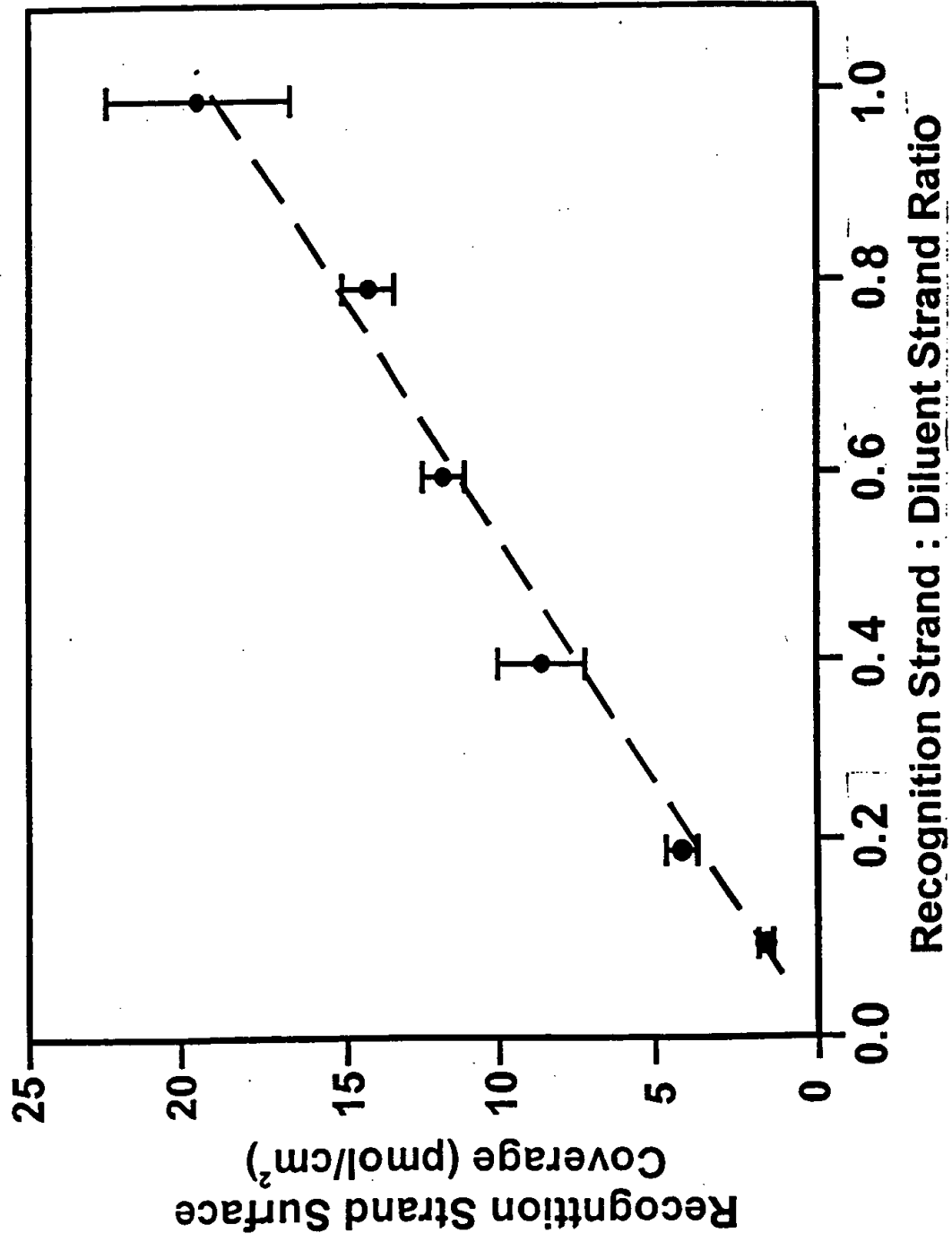


Figure 30

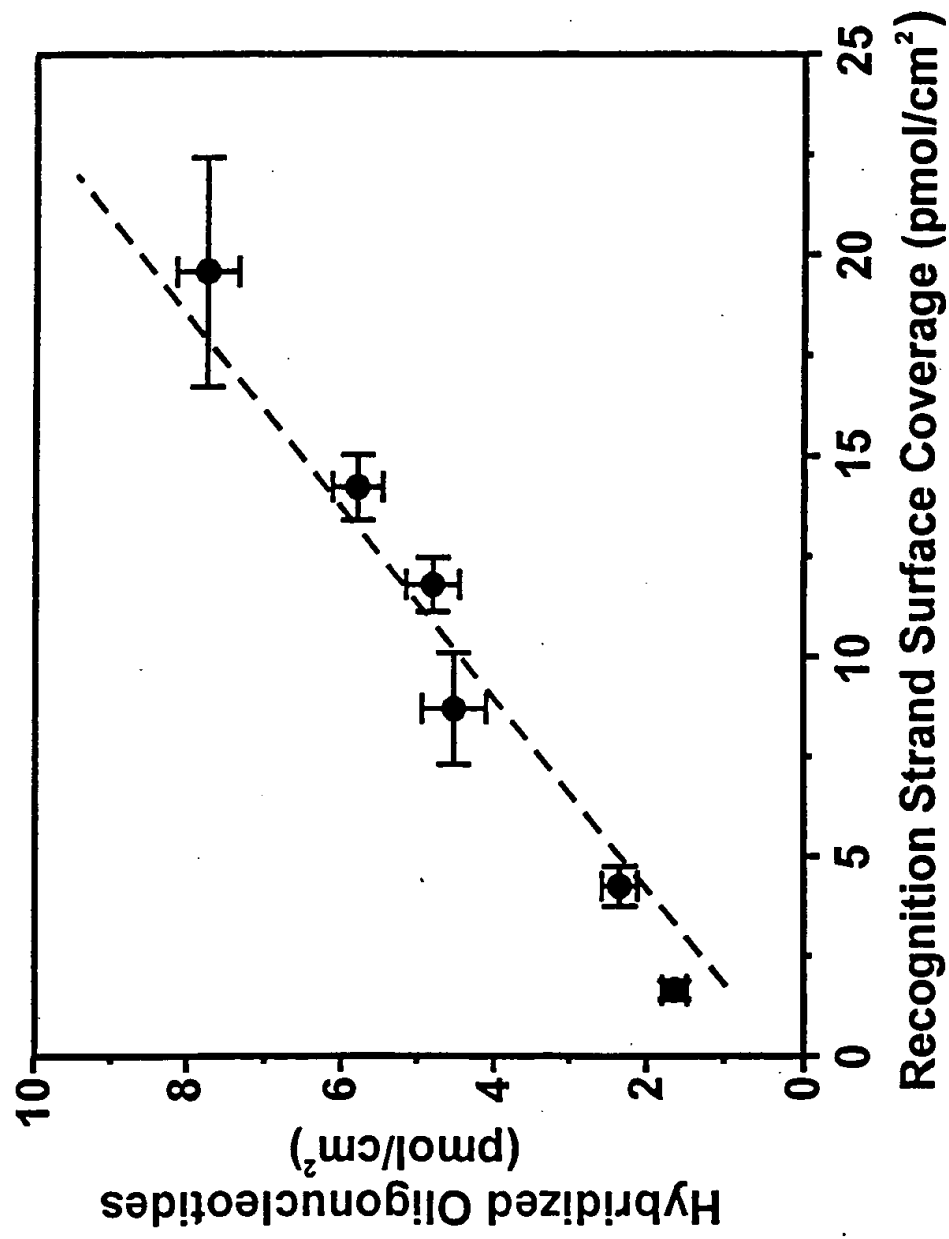


Figure 31

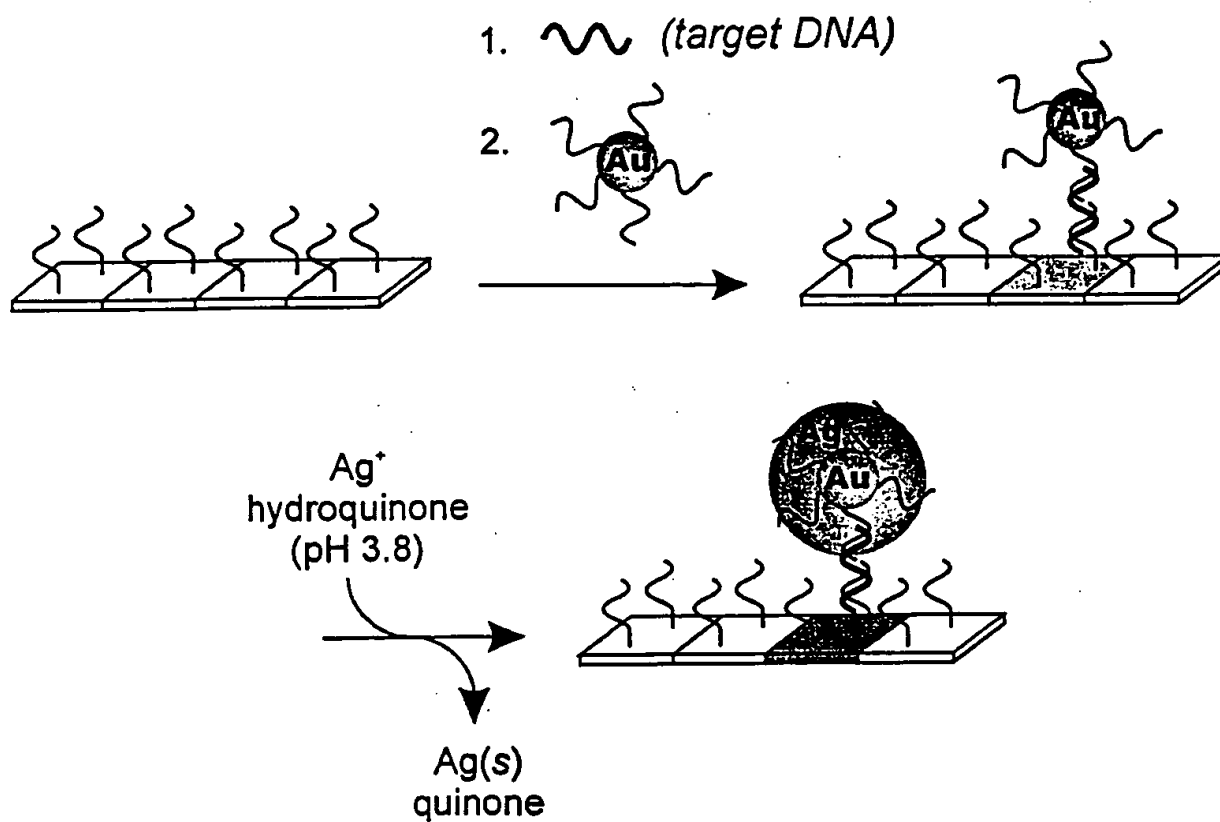
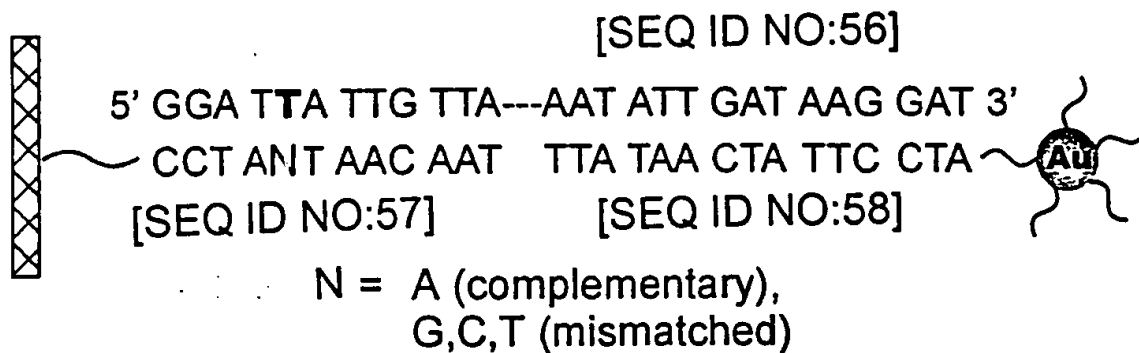


Figure 32

0007536-101101
TOTTOT 9/25/660

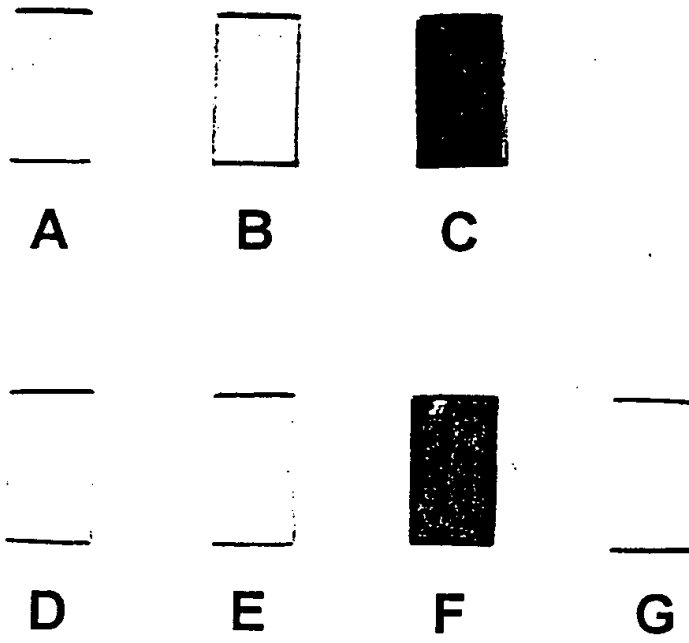


Figure 33

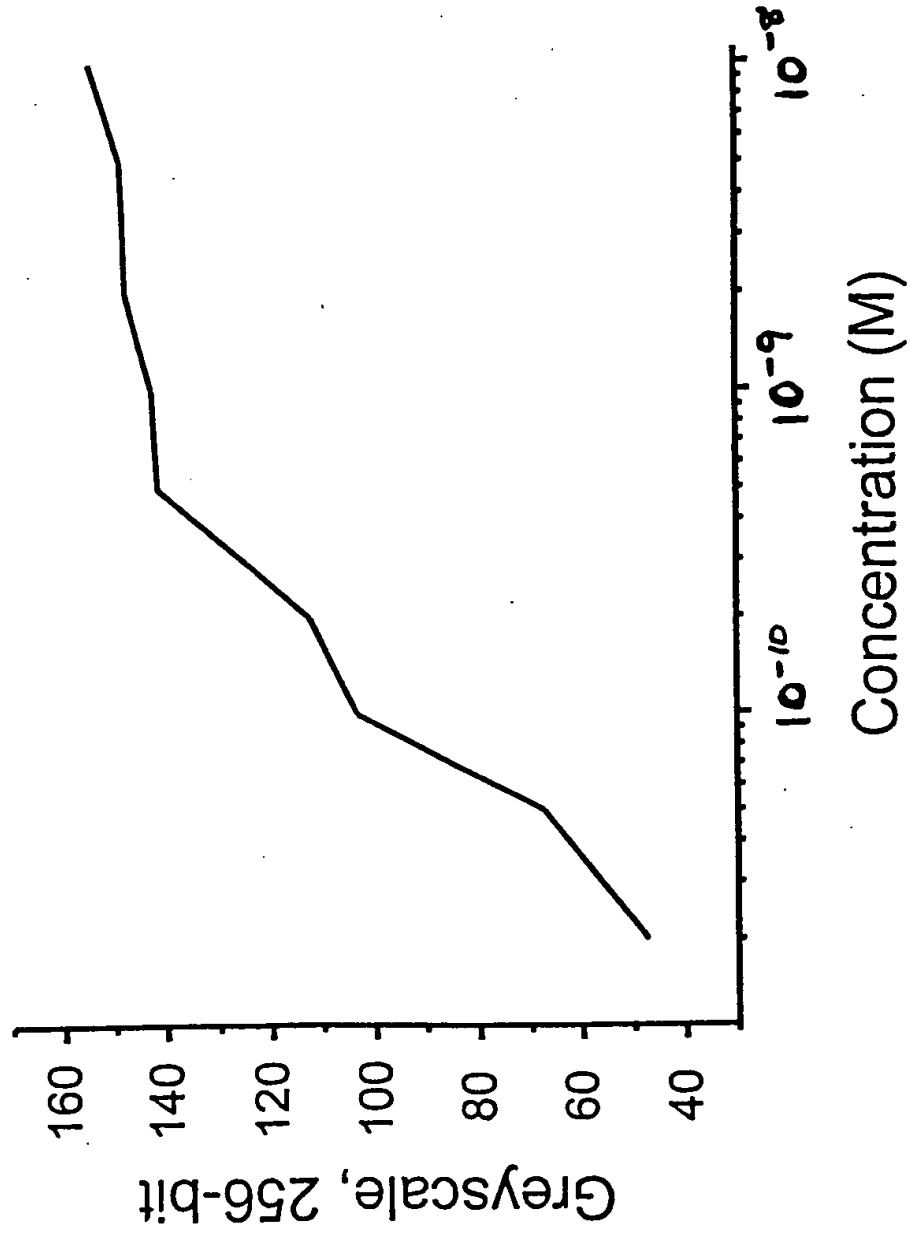


Figure 34

TOTOT-92ES2660

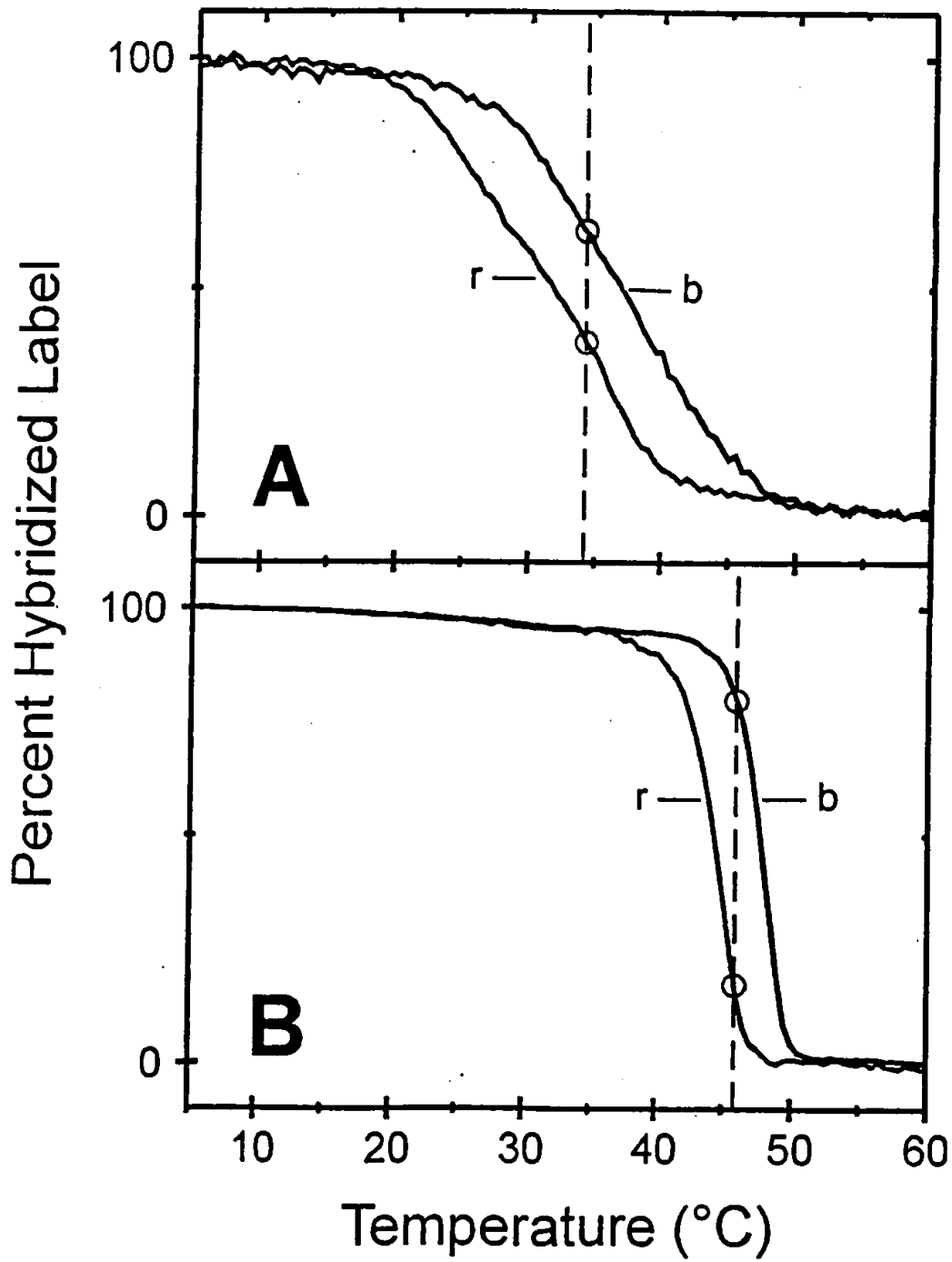


Figure 35

FOI 92552660

FIG. 36A

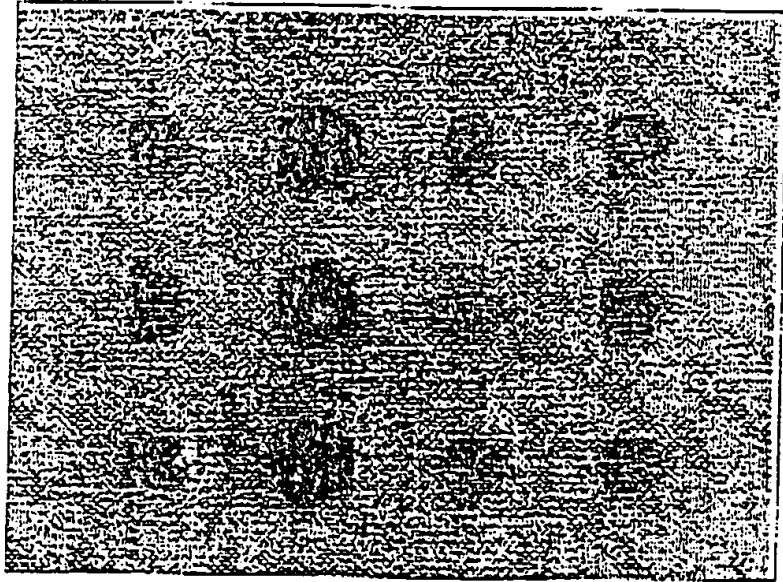
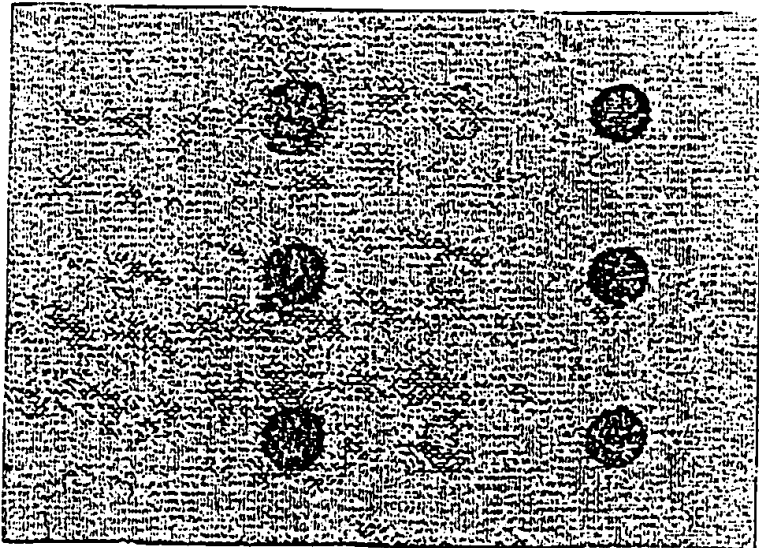


FIG. 36B



C A T G

FOOT-925260

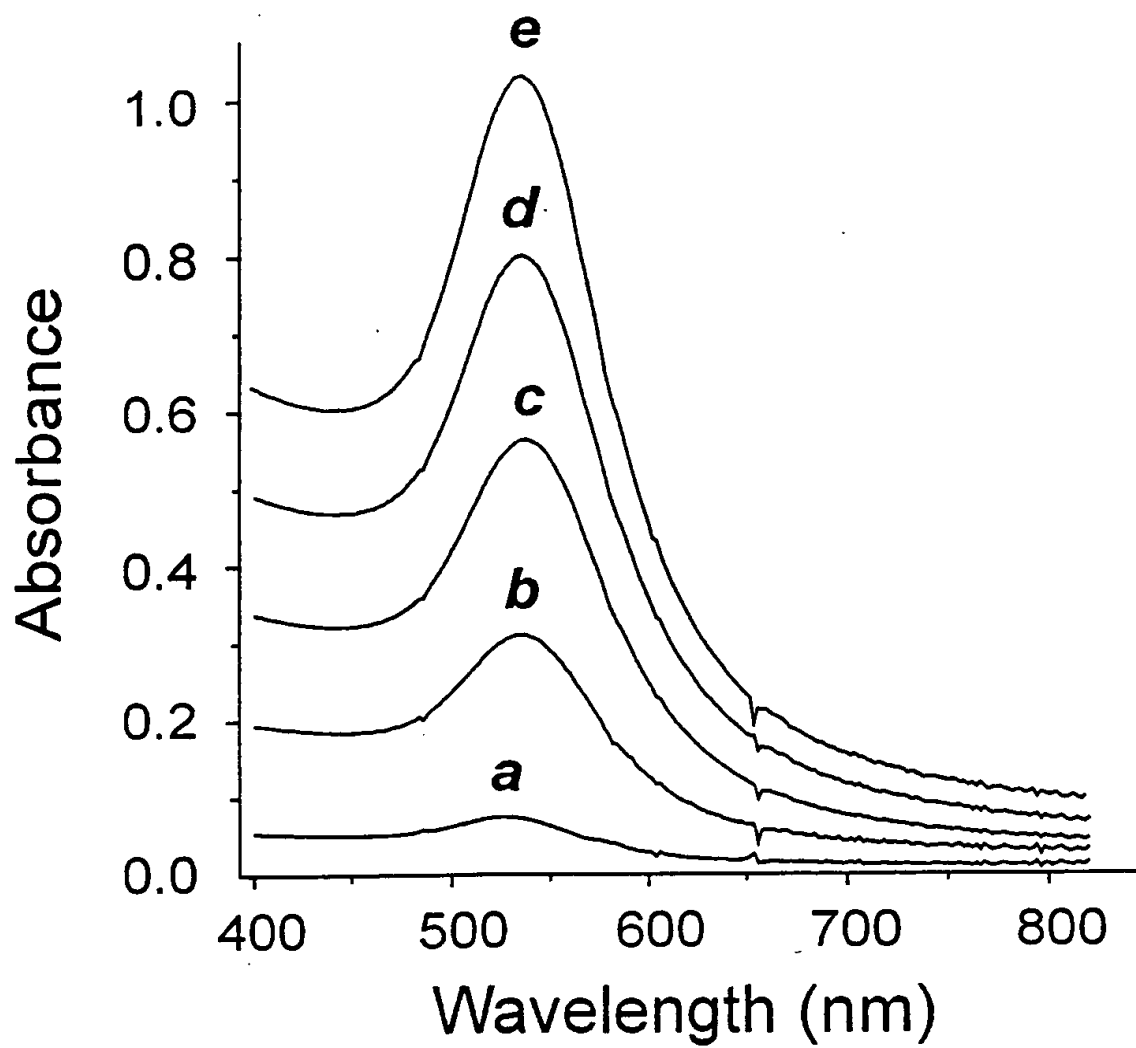


Figure 38A

TOTOT-92E92660

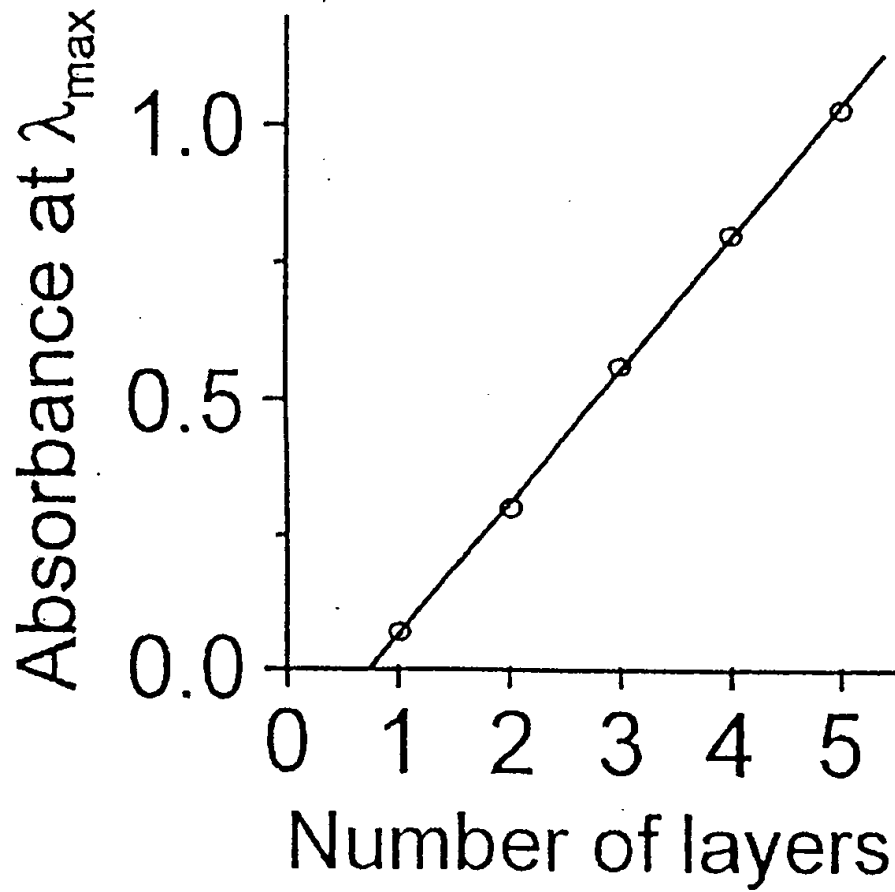


Figure 38B

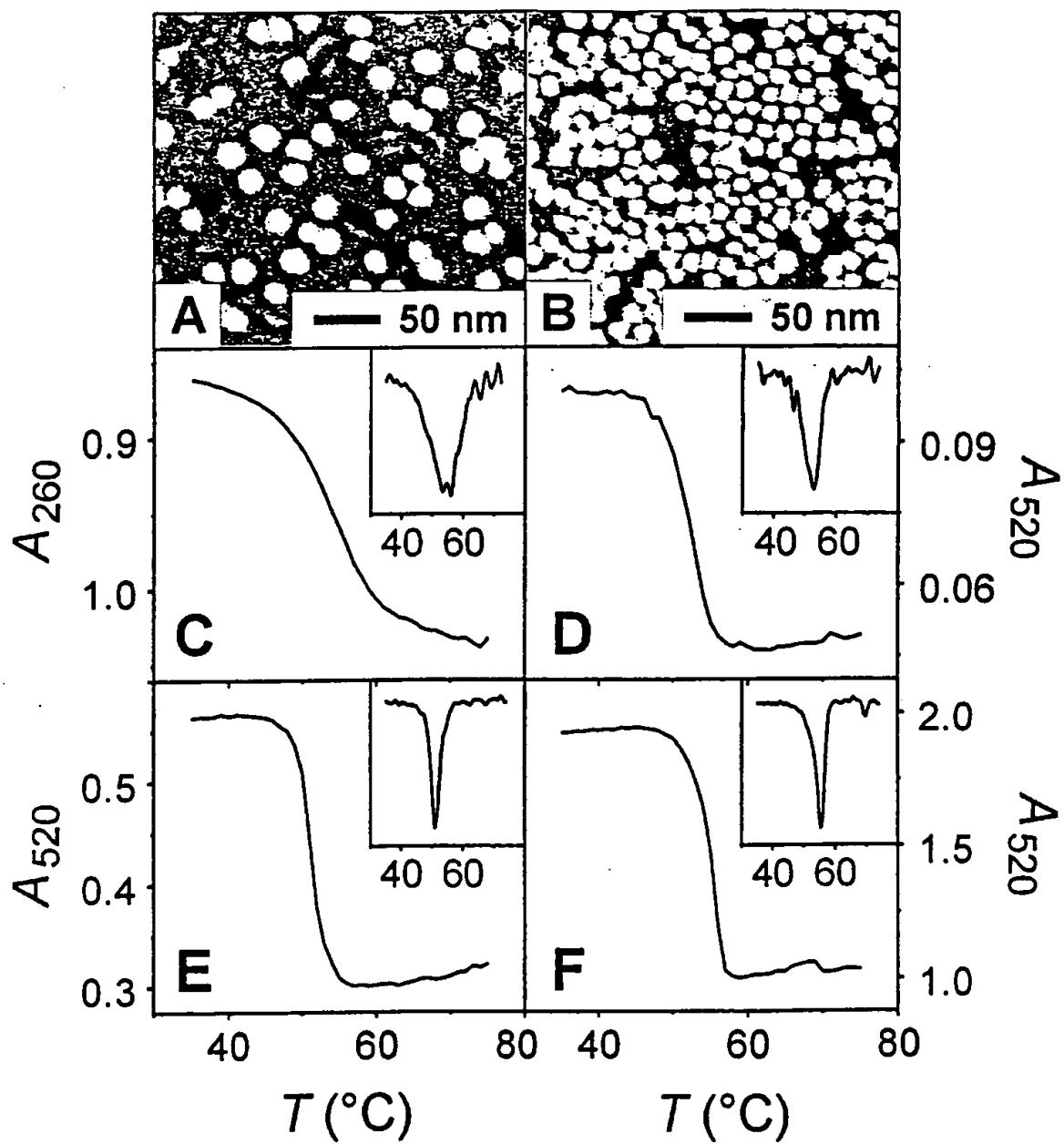


Figure 39

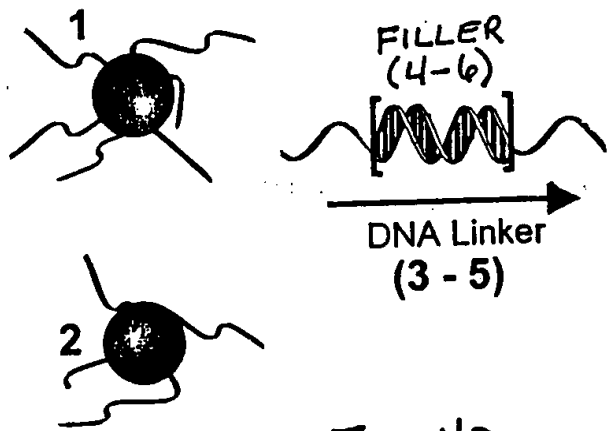
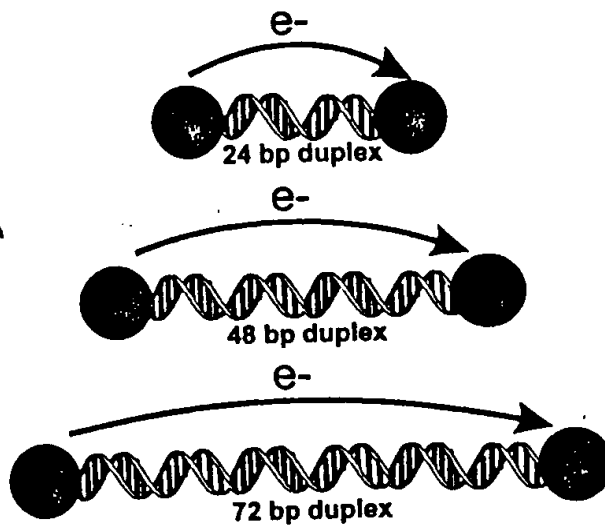


FIG. 40



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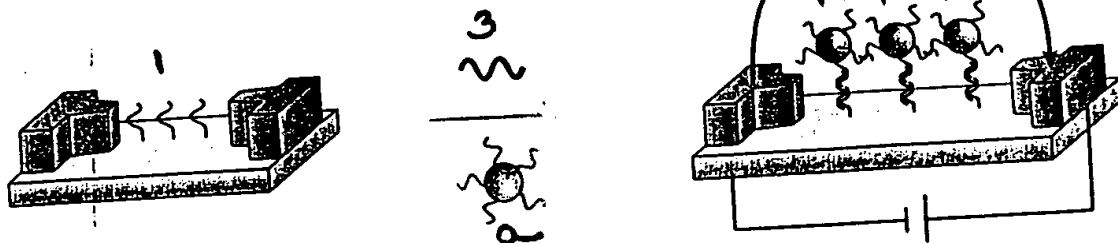


FIG. 41